THE CHICAGO RAILWAY TERMINAL PROBLEM.

REPORTS

OF THE

CHICAGO TERMINAL COMMISSION

TO THE

MAYOR AND COMMON COUNCIL

OF THE

CITY OF CHICAGO,

DATED MAY 12TH AND JULY 11TH, 1892.

LETTERS, REPORTS, BRIEFS, OPINIONS, COURT DECISIONS, AND LEADING ARTICLES

DISCUSSING

THE CHICAGO RAILWAY TERMINAL PROBLEM, AND ITS SOLUTION,

FROM THE STANDPOINT OF

MECHANICAL AND HYDRAULIC ENGINEERS, LAWYERS, JUDGES, AND THE PUBLIC PRESS.

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PRESS OF
JENKINS & McCOWAN,
NEW YORK.

MAYOR'S OFFICE,
CHICAGO, Feb. 15, 1892.

To the Honorable the City Council of the City of Chicago:

GENTLEMEN—I beg leave to call your attention to the subject of grade crossings of railroads and streets within the city, and the importance of providing, without delay, the best remedy for this evil.

There are within the city, I think, one thousand, or thereabouts, of such crossings of streets and railroads, at some of which a large number of railroad tracks cross the streets at grade.

At these crossings, according to the report of the Coroner, over three hundred persons met their death during the last year. The deaths at these crossings exceed in number, I believe, all the death casualties of any other kind together. The injury to persons and property is not the only great evil of grade crossings. The delays occasioned are very serious. The fire department was detained in reaching fires over three hundred times during the last year, and the total time of such delays was over sixteen hours. The delays to traffic and business are enormous. These are some of the evils to be considered in addition to the great number of casualties caused by grade crossings. The facts demonstrate the utter insufficiency of the means of protection which have been heretofore afforded at these crossings. In addition to the

crossings now existing the public travel requires the opening of new streets over these railroads. The public necessity for streets must be accommodated, and the crossings of the streets must be kept in a reasonably safe condition for the public travel thereon. On the other hand the public importance of speedy transit upon the railroads is to be taken into account. The people require rapid transit. To accomplish these results grade crossings must be done away with. It has been the policy of city authorities, heretofore, to meet this necessity by carrying the streets over the railroads by means of viaducts, and a comparatively few streets are thus provided for. But the few viaducts constructed within the last sixteen years have cost about three million dollars for construction and land damages. Aside from this there is the cost of repair and maintenance. The loss incurred by reason of additional hauling up of the viaducts is enormous. The number of viaducts is now entirely inadequate. If viaducts were placed at ten times the number of street crossings at which they now exist, the public travel would not be met when their construction had been completed. Some idea of the expense involved in providing adequate crossings, by means of viaducts, may be gained from consideration of these facts, but the estimate would probably be then too small, and the means thus provided would then be inadequate. The necessity for additional crossings would be constant, and if the public necessity were adequately accommodated by viaducts, aside from the enormous first cost, the cost of maintenance and reconstruction would itself be enormous.

It would, therefore, seem that viaducts do not,

and cannot be made to meet the necessities of the case, or to afford any adequate remedy.

What is the remedy? I beg to recommend that this subject be taken up energetically and thoroughly; that the best remedy be determined upon and be applied, and that our best thoughts be now given to this subject, and that the same be not dropped or delayed, but be pressed until this evil of grade crossings be forever removed.

I assure you that it is my desire and purpose to take hold of this matter with you in this way, and with this end in view.

I beg to urge upon your consideration the question of elevated terminals within the City of Chicago, and of compelling railroads to elevate their tracks so as to permit the crossings of streets underneath the tracks. I am advised by the Corporation Counsel that the City Council is possessed of adequate power in the premises, and an opinion to this effect has heretofore been rendered to your Committee on Railroads. The trend of late judicial decisions upon the subject of police power confirms this opinion. The practical solution of the question in this way, however, presents many difficulties,and can only be reached, in my opinion, by a careful consideration of all conditions. Our city in this respect is peculiarly situated, and it would be unwise to disarrange the existing condition of affairs until we are prepared to submit a remedy which shall consider the interests, and all conditions fairly and thoroughly. It has been urged that if all the railway tracks within the city were now to be elevated, aside from the cost to railway companies, a large number of industries, great and small, situated along the roads

of our respective railroads, which have been constructed for their railroad facilities, and to conform to the present state of affairs, would be destroyed. And it has been represented on the part of the railroad companies that the cost itself of making this change in all their tracks would be so enormous as to bankrupt the companies. The conditions vary and might be met by varying remedies.

It has been suggested that the remedy lies in part in bringing about a removal of railway tracks and terminals from the immediate business centre of the city, and the consequent increase of the business district. The railroads lying along or adjacent to the banks of the river, where they are now crossed by viaducts leading to the bridges, present conditions different from the railroads lying elsewhere.

The validity of any ordinance that you may pass upon depends upon its reasonableness. Your ordinance must be reasonable in order to be valid. Its reasonableness will be determined in view of all the considerations of the facts and circumstances in the premises. But your conclusion upon that embodied in the ordinance will go far to establish its own reasonableness. You are the first judge of those conditions, facts and circumstances. But they should all be carefully investigated, gone over and considered, and the solution of this problem which shall be arrived at must be one that will afford permanent remedy. The fact of the growth of the city must be considered, as well as its present condition and needs. The remedy must be no temporary shift. These facts all demonstrate that this problem cannot be settled without a most careful consideration by persons desig-

nated for this specific purpose, who, by their skill, judgment, and broad-mindedness will be regarded as able to cope with the problem.

I therefore suggest that a committee consisting of three experts be appointed to immediately take up this subject and proceed to make a complete and thorough investigation of this subject and report to your Honorable Body at the earliest possible moment, and within three months from the date of their appointment. That they should be employed at a proper salary, in order that they may give their entire time to this subject, and that they be authorized to employ such clerical and other help as may be necessary, and to incur such legitimate expenses in their investigation as the circumstances justify.

Respectfully submitted,

HEMPSTEAD WASHBURNE,

Mayor.

In connection with the foregoing, Ald. Madden presented a resolution providing for the appointment of three experts as recommended by His Honor the Mayor, and moved its passage.

The motion prevailed unanimously.

The following is the resolution as passed :

Resolved, That the Mayor be and is hereby authorized to employ three experts who shall examine the roads and construction of all terminal steam railroads now centering in Chicago on grade crossings. That said three experts be appointed for the purpose of suggesting a remedy whereby grade crossings on all of said terminal roads can be abolished by elevation or otherwise.

That said experts be required to report in each case some method by which grade crossings can forever be abolished within the City of Chicago. And that they be authorized to collect such information from abroad and at home, as shall fully advise them upon the best methods to accomplish this result. That the said experts and such assistants as they may require, be paid from money not otherwise appropriated. And that they be authorized to proceed immediately with their work and to report to this Council within three months from the date of their appointment.

MAYOR'S OFFICE,
CHICAGO, May 16, 1892.

To the Honorable the City Council:

GENTLEMEN—I herewith forward for your consideration the report, with accompanying maps and plans, of the Chicago Terminal Commission.

The report you will find ample and comprehensive and well worthy of the perusal and attention of your Honorable Body.

Respectfully submitted,
HEMPSTEAD WASHBURNE,
Mayor.

The following is the report:

CHICAGO, May 12, 1892.

To the Honorable Hempstead Washburne, Mayor of the City of Chicago:

DEAR SIR—Your Commissioners who were appointed to examine the road and constructions of all terminal steam railroads now centering in Chicago on

grade crossings, and to suggest a remedy whereby grade crossings on all said terminal roads could be abolished by elevation or otherwise, beg leave to make the following preliminary report:

Your Commissioners, acting upon instructions contained in the resolution passed by the City Council February 15, 1892, whereby this commission was created, authorizing the Commissioners to gather such information from abroad and at home as would fully advise them upon the best methods to accomplish the result for which they were appointed, would say: That they started with the Chief Engineer of the Commission, Mr. Carl Binder, on the 5th day of April to make a tour of eastern cities where the same subject has been under consideration, and had been successfully dealt with, to investigate how the subject had been handled by the city authorities, and to profit by their experience in the solution of this most important problem at home.

Our first visit was made to the City of Philadelphia; here we found the main or terminal station of the Pennsylvania road opposite the City Hall or Municipal Building; this station was built about 14 years ago. The line to the station from West Philadelphia is an elevated structure about one mile long, having three tracks. The ground floor of the station is used for ticket offices, baggage rooms, and for the entrance of carriages and other vehicles. Staircases and elevators give access to the second floor where the tracks, waiting-rooms, restaurants, etc., are located. About 240 trains arrive, and the same number leave this station every twenty-four hours. The capacity of this station is rather small for the large traffic, and an en-

largement is planned for the near future. Other parts of the ground floor of this elevated structure are used for storage rooms, engine room and freight station.

The freight is received on the ground floor and is by hydraulic lifts elevated to the second floor, and loaded into the cars which are run in on side tracks; the unloading is done in the reverse way. The system works very satisfactorily according to the testimony of the Pennsylvania Railroad officials, and they would not care to go back to the old system under any circumstances.

The Philadelphia & Reading Railroad is at present building a new elevated station in the heart of the city, at Market street, and is to come into this station on an elevated structure. The main part of this elevated structure is built as an embankment with retaining walls. The streets are crossed by stone arches and iron bridges; the station is elevated on iron columns. Part of the ground floor and basement of this station is already in use as a market, and is a very fine example of how space below elevated railroads in cities where property is valuable, can be utilized

The City of Philadelphia in conjunction with the railroads is making great effort to abolish all street crossings at grade; most of them have already been abolished, and the rest will be in the near future.

According to the contour of the locality, the streets run over or under the railroads. The city engineers of Philadelphia recommend, in accordance with their long experience in this line, that 15 feet is a minimum height for subways, but in the most instances they would recommend 16 feet; 13 and 14 feet have been proven insufficient.

The railroad companies are paying for all the improvements for the width of their right of way, while the city in some instances, jointly with the companies, pays the damages, if any, and the costs outside of the right of way of the railroad; but, as a rule, the railroad companies pay all the damages to property; for instance, the Philadelphia & Reading Railroad Company, with its new entrance into Philadelphia, wanted to make changes of their line crossing Broad street, and, in return for this, the city requires the railroad company to build a viaduct over Broad street. For the payment of damages alone the Philadelphia & Reading Road has filed a bond for $1,000,000.

The city authorities are also exerting their influence towards abolishing railroad crossings at grade; for instance, the crossings of the Philadelphia & Reading Railroad, with the Pennsylvania Railroad, will be abolished this year by depressing the tracks of the Philadelphia & Reading Railroad. This improvement will cost about four hundred thousand dollars.

The Pennsylvania Railroad Company is at present engaged in doing away with the grade crossing of the tracks of their western and New York divisions, so that the tracks for the western division will go under the New York tracks. This improvement involves a great expenditure.

We are also informed by the city authorities of Philadelphia that the Baltimore & Ohio Railroad, which now comes into the city of Philadelphia at street level, will have to elevate before long, and that within two years the street railroad grade crossings in Philadelphia will belong to the past. All this has

been and will be accomplished by mutual concession and without legal proceedings or litigation.

At Jersey City we found that the Pennsylvania Railroad Company's tracks were elevated about three years ago. Previous to the elevation of their tracks the trains were obliged to run through the city very slowly, and accidents, whereby people were killed or injured, were almost a daily occurrence. They now run their trains through the city on this elevated structure at full speed. Part of the structure is of solid earth between retaining walls, with bridges at intersecting streets, and about 3,000 feet of it is of iron bridges, which support four tracks with the wooden ties and planking. The structure is a very substantial one and cost per lineal foot, including ties and rails, about one hundred and fifty dollars. The foundations have been very expensive; similar structures could be put up in Chicago, at present prices for iron, excluding ties and rails, at about five hundred thousand dollars per mile. This elevation, we are informed, was done at the urgent request of the Pennsylvania Railroad Company, said company paying all damages and expenses of elevating.

At Hartford, Conn., and Springfield, Mass., the Boston & Albany Railroad has elevated its terminals. The structure is partly iron trestle work and partly solid earth between retaining walls. The depot at Hartford accommodates also the New York & New England Railroad, and the arrangement, by means of subways, is so that passengers do not cross the tracks.

The city of Boston and State of Massachusetts appointed a commission about one year ago to study the question of rapid transit through the city. This com-

mission has worked out a plan for an elevated road and partly tunnel through the Commons (a park in that city). This plan provides for widening the streets and connecting the different steam railroad stations. In connection with this the commission has tried to improve the terminal facilities of the railroads, and has given to the different railroads one year's time to make detailed plans for such improvements. These proposed improvements for rapid transit are estimated to cost from sixty to seventy million dollars. A larger part of this expense, however, will be for the proposed widening and straightening of streets and for paying damages to property in order that the proposed elevated rapid transit line may connect with the different steam railroad stations. The City of Boston has already done away with a great many street crossings at grade; for instance, the Boston and Albany Railroad has abolished all such crossings within the city limits.

At Rochester, N. Y., the New York Central and Hudson River Railway Company elevated their tracks through the city about nine years ago. The structure is of solid earthwork between retaining walls, and the streets are crossed by the railroads on iron bridges. At the time when this work was under consideration the city obtained from the Legislature a right to appoint a commission, which was organized on the 26th day of April, 1880, and ended their work on the 29th day of December, 1886. At that date the object for which they were appointed was accomplished in a very satisfactory manner. This commission, by an act of the Legislature, was given power to agree with the railroad company upon plans for elevation and also

for closing or opening such streets, lanes and alleys as they might deem proper, to make such concessions as they thought advisable in order to hasten the completion of the elevated tracks, but they could not subject the city to any portion of the costs or damages that might occur by the elevation of the said tracks. The entire cost was paid by the New York Central and Hudson River Railroad Company and, according to the official statement made by the comptroller of that corporation, was $1,726,617.62.

In the City of Buffalo the question of grade crossings has been agitated for a long time. Four years ago a commission was appointed to solve this problem, and a plan was designed for a Union Depot to accommodate all of the railroads entering the city. According to this plan the railroads would have been elevated throughout the city, but as the New York Central and Hudson River Railroad Company claimed to have better depot facilities for their own roads, and as they wanted at least the controlling interest in the Union Depot, this plan had to be given up. After considerable discussion with the railroads a new plan was made, which does not make any material changes in the present depot facilities and tracks, but proposes viaducts and subways, according to the locality.

Some of the railroads, particularly the New York Central and the Hudson River Railroad, which opposed the Union Depot scheme, have shown their willingness to give relief to the city traffic by carrying out this plan, and the other railroads will be brought in line by the enactment of special laws by the Legislature of the State of New York, so that the subways

and viaducts will be built by the city with a lien on the property of the railroads if they refuse to make improvements as ordered by the city authorities. According to some agreements already made, the railroads pay the whole costs within their right of way and two-thirds outside of it, while the city is to pay the remaining one-third.

From our observations in eastern cities where elevated systems are now in successful operation, we have come to the conclusion that railroad tracks within the city limits of Chicago as a general rule can be and should be elevated, thereby abolishing street grade crossings. We are not prepared at present to recommend how this most important problem can be solved, as it involves so many different interests which should be carefully considered before we can reach a final conclusion.

We have been at work daily since our appointment and have had meetings and consultations with different railroad and city officials and citizens, and we have been over the line of several railroads to the city limits and have carefully examined the numerous street grade crossings of the same, and we are now at work preparing plans. It is our intention to go over the line of every railroad entering the city, in order to become perfectly familiar with the peculiarities of each road, so that we can recommend a plan for each road that will do away with street grade crossings within the city limits. This, of course, will require some time, and as the city council ordered us to make a report in three months, we would respectfully ask that the time be extended, inasmuch as we find it impossible to make a clear and comprehensive report in

that time. We are, however, pushing the work forward as rapidly as possible, and will make, from time to time, reports about the terminals of the different roads.

In other cities where the problem has been of vastly less importance, it has taken years to bring about the desired result. Take for instance the city of Rochester: here the agitation of elevated tracks was commenced in 1874, and it was not until 1882 that the work of elevation was actually begun.

At Buffalo a commission has been at work for four years, and has just succeeded in devising a plan that promises to solve the problem.

You will, therefore, see that Chicago, the greatest railroad center on this continent, and probably the greatest in the world, cannot expect to solve the problem in three months time; nor can your commission, even in that time, be expected to recommend a plan that would be at all satisfactory.

On account of sickness Mr. Fred S. James, one of the Commissioners, was unable to make the tour of eastern cities, and therefore has not signed this report.

Very respectfully,

GEO. HACKNEY.
E. S. DREYER.
CARL BINDER,
Chief Engineer.

MAYOR'S OFFICE,
CHICAGO, July 11, 1892.

To the Honorable, the Common Council:

GENTLEMEN—I herewith submit for your consideration the report of the Railway Terminal Commis-

sion appointed by your authority, under an order of Feb. 15, 1892.

It is unnecessary for me to review this exhaustive and comprehensive report, and I therefore submit it to you. I desire to thank the members of this Commission for their arduous and exhaustive labors and for the able report they submit, and trust it will meet with your favorable consideration.

I desire personally to thank the members of this Commission, now that they are about to disband, and to say I believe the result of their work will greatly aid the City Council in shaping legislation, so much needed by the city, to render life and limb secure, and free our streets from the burdensome traffic now so detrimental to our thoroughfares.

Respectfully submitted,

HEMPSTEAD WASHBURNE,
Mayor

To the Honorable Mayor and Common Council of the city of Chicago:

GENTLEMEN — At the meeting of the Common Council of the city of Chicago, held Feb. 15, 1892, his Honor the Mayor submitted a message on the subject of grade crossings of railroads and streets within the city, and the importance of providing, without delay, the best remedy for this evil.

In this message the great loss of life, the inconvenience to the public, the injury to abutting property and other considerations, were recited as showing the pressing necessity for some immediate action to give relief from existing conditions.

Pursuant to the recommendations of the message, the following resolution was unanimously adopted:

"*Resolved*, that the Mayor be and he is hereby authorized to employ three experts, who shall examine the roads and construction of all terminal steam railroads now centering in Chicago on grade crossings. That said three experts be appointed for the purpose of suggesting a remedy whereby grade crossing on all of said terminal roads can be abolished by elevation or otherwise.

"That said experts be required to report in each case some method by which grade crossings can forever be abolished within the City of Chicago. And that they be authorized to collect such information from abroad and at home as shall fully advise them upon the best methods to accomplish this result. That the said experts and such assistants as they may require, be paid from money not otherwise appropriated. And that they be authorized to proceed immediately with their work and to report to this Council within three months from the date of their appointment."

The undersigned having, in pursuance of said resolution, been appointed by his Honor the Mayor as Commissioners to examine and report upon all the questions covered by the said resolution, beg leave to refer to the former report made by them, dated May 12, 1892, addressed to his Honor the Mayor, and by him submitted to the Council, and published in the proceedings of the regular meeting of that body for May 16, 1892.

By a resolution of the Council, May 23d, the time of service of this Commission was extended three months from that date.

Your Commission has continued its labors, and as a result thereof, after mature consideration and a study of all the problems involved, submits the following recommendations, as being, upon the whole, the best to secure the results desired in the interests of the public, and as we believe of the railroad companies themselves.

I.

By reason of the division of the City of Chicago by the Chicago river into three districts, the North, South, and West sides, it is evident to your Commission that the different railroads entering the city through these districts must be arranged and classified into separate groups.

II.

The necessity for the immediate adoption of some plan for removal of traffic of the steam railroads from the surface of the streets and highways of the city is imperative and unquestionable, and should not longer be postponed.

This necessity arises from the highest of considerations, namely, the protection of human life, both with respect to those using the streets for the primary purposes for which they were created, as well as protection to those traveling upon, or operating the trains of the steam railroad lines.

This overruling necessity found expression in the message of the Mayor, above referred to, and in the prompt and unanimous action of the Council thereon, and is strongly emphasized in the voice of public sentiment by the people and through the press.

In this connection we have had compiled statistics by persons employed by us, showing, from 6 A. M. to 7 P. M., a period of thirteen hours, the number of vehicles, street cars, street-car passengers, pedestrians, number of delays, total time of delays, delays to vehicles, delays to street cars, delays to street-car passengers, delays to pedestrians and cost of delays at a number of the principal intersections within the city, from which it will appear that the item of delay alone, computed on the basis of a fair day's average of delays for the entire year, involves an expense to persons, vehicles, etc., delayed, of nearly one-half a million dollars annually, and this, too, at only thirty-six out of fifteen hundred and upward of crossings. A table showing the foregoing in detail is submitted herewith.

The number of persons (not including railroad employés) killed upon steam railroad tracks within the city has been so recently the subject of extended discussion in the public press, that it is not necessary to dwell upon the harrowing details.

III.

Your Commission is advised by the law officers of the city, that as to the control of the streets and highways within the city, its charter confers upon the Common Council full authority for preserving the streets and highways to the free and unrestricted use of the public and the protection of human life in the exercise of this right.

Your Commission is further advised that in the exercise of the powers so conferred upon it, the Com-

OBSERVATION OF CROSSINGS.

Streets.	Railroads.	TOTAL TRAFFIC. Vehicles.	Street Car Number.	Street Car Passeng'rs.	Pedestrians.	DELAYS. Number of Delays.	Total Minut's Del'y	Vehicles.	Street Cars.	Street Car Passeng'rs.	Pedestrians.	Cost of Delays.	FOR THIRTEEN HOURS: 6 A. M. TO 7 P. M. Remarks.
Harrison	L. S. & M. S. and C., R. I. & P. R. Rs.	2,475	.....	.....	10,874	196	403	1,234	.....	... .	1,482	$51 00	7 R. R. tracks; all of them main; gates; view obstructed; trains run slow.
Twenty-second	" " " "	1,906	33	65	3,113	129	200	567	18	36	729	22 60	4 R. R. tracks; all of them main; gates; view obstructed; trains partially.
Thirty-first	" " " "	979	293	5,920	3,753	100	231	435	126	2,520	1,891	81 10	6 R. R. tracks; four of them main; gates; view obstructed; trains partially.
Thirty-ninth	" " " "	978	470	4 163	2,370	99	226	398	169	1,495	1,279	54 86	8 R. R. tracks; four of them main; gates; view clear.
Forty-seventh	" " " "	1,034	123	1,435	2,384	158	287	430	61	683	770	24 98	13 R. R. tracks; four of them main; gates; view obstructed.
State	L. S. & M. S. and P., Ft. W. & C. R. Rs.	647	.....	... .	2,874	26	51	88	.....	.....	234	5 12	25 R. R. tracks: four of them main; no gates; view obstructed by cars and curves.
Taylor	C. & W. I. R. R.	1,960	.....	.....	3.322	102	258	661	.....	....	471	28 00	Many tracks; all of them main; gates; view obstructed; trains run slow.
Clark	C. & W. I. and others.	2,510	661	18,605	1,320	192	326	1,233	402	11,316	346	110 26	12 R. R. tracks; all of them main; gates.
Archer avenue	C. & W. I. R. R.	1,395	526	12,783	2,519	160	278	599	247	6,002	579	88 84	6 R. R. tracks; all of them main; gates; view obstructed partially; slowly.
Root	" "	1,681	433	3,308	2,594	207	268	656	192	1,463	477	20 00	13 R. R. tracks; four of them main; gates; view clear.
Fifty-fifth	" "	384	.....	.. ....	541	8	31	8	...	....	29	1 12	2 R. R. tracks; both of them main; gates; view clear.
Sixty-third	" "	711	232	1,714	1,685	52	89	152	61	451	347	12 93	2 R. R. tracks; both of them main; gates; view obstructed.
State	St. Charles Air Line.	3,091	1,066	50,044	3,128	60	95	362	126	5.922	333	70 31	2 R. R. tracks; both of them main; gates; view obstructed.
Wabash	" "	3,589	990	54,404	4,344	71	93	408	124	6,820	300	67 73	2 R. R. tracks; both of them main; gates; view obstructed partially.
Michigan	" "	4,856	.....	.....	4.462	68	98	457	.....	.....	179	10 23	2 R. R. tracks; both of them main; gates; view obstructed; trains run rapid.
Halsted	Union Stock Yards R. R.	2,734	...	....	8,126	144	320	1,212	....	... .	3,031	76 71	17 R. R. tracks; all for switching; no gates.
State	" " "	918	716	50,044	2,639	20	33	48	35	1,645	173	23 20	2 R. R. tracks; no gates; view clear.
Grand Boulevard	" " "	1,790	.....	.....	1,428	49	37	70	....	....	45	86	2 R. R. tracks; no gates; view clear.
Clinton and Kinzie	C. & N. W. and P., C., C. & St. L. R. Rs.	4,635	.....	.....	5,897	123	344	2,160	.....	.....	1,250	95 58	17 R. R. tracks; mostly main; some gates; view obstructed; delays serious.
May	" " " "	968	.....	.....	728	77	200	179	.....	.....	240	6 54	16 R. R. tracks; four of them main: some gates; view obstructed.
Robey	" " " "	666	.....	.....	1,470	43	88	199	.....	....	152	6 88	15 R. R. tracks; four of them main; some gates; view obstructed partially.
Lake	P., C., C. & St. L. and C. & N. W. R. Rs.	1,179	235	3,000	1,161	54	106	199	63	806	220	19 55	7 R. R. tracks; four of them main; some gates; view clear.
Madison	" " " "	708	676	18,000	2,852	109	158	123	206	5,485	320	64 71	6 R. R. tracks; four of them main; some gates; view clear, partially.
Van Buren	" " " "	699	458	6,000	857	48	107	120	93	1,218	154	26 17	7 R. R. tracks; four of them main; some gates; view obstructed partially by cars.
Twelfth	" " " "	2,444	562	6,000	2,360	88	165	594	200	2,120	296	50 53	9 R. R. tracks; four of them main; some gates; view bad; curves; fast trains; dangerous.
Jefferson	" " C., B. & Q., etc.	889	.....	....	2,298	80	394	474	.....	.....	602	48 44	27 R. R. tracks; six of them main; some gates; view obstructed; trains run rapid.
Ashland Boulevard	" " " "	500	.....	.....	2,417	71	199	148	.....	.....	420	7 84	10 R. R. tracks; six of them main; some gates; view obstructed; trains run rapid.
Wood	" " " "	547	.....	.....	1,448	72	238	226	.....	.....	217	13 93	15 R. R. tracks; six of them main; some gates; view obstructed; trains run rapid.
Western avenue	" " " "	1,006	.....	.....	2.072	74	259	371	.....	.....	427	25 55	9 R. R. tracks; six of them main; some gates; not in use; trains run rapid.
Rush	C. & W. R. R.	9,801		.....	14,724	5	10	78	....	... ...	69	2 81	1 R. R. track; street on heavy grade; view obstructed.
Division	" "	1,389	108	1,940	3.332	99	156	302	27	485	402	15 51	5 R. R. tracks; three of them main; gates; trains run rapidly.
North avenue	" "	992	194	3,083	1,706	72	160	219	57	912	150	15 37	7 R. R. tracks; three of them main; gates; view clear.
Chicago avenue	C., M. & St. P. R. R.	1,961	184	1,494	6,359	53	47	158	17	138	399	4 90	4 R. R. tracks; two of them main; gates; view obstructed by curves and buildings.
Halsted and Division	" " "	4.342	287	7,940	4,280	58	81	316	41	1,148	48	16 83	2 R. R. tracks; both of them main; gates; view obstructed; two street car lines.
Ashland avenue	" " "	912	258	4,000	1,732	35	52	40	5	77	38	1 91	2 R. R. tracks; both of them main; gates; view obstructed, partially.
Milwaukee avenue	" " "	1,119	640	8,000	2,012	29	48	79	50	625	113	12 13	2 R. R. tracks; both of them main; gates; view clear.
Totals for one day		68.375	9,145	261,942	119,181	3,031	6,136	15,003	2,320	51.367	18,212	$1,194 05	Expense for one year, thirty-six crossings $435,828.20

mon Council has authority to adopt such plan as it may deem most efficient to accomplish this result.

Your Commission is further advised that this power exists not only with respect to streets and highways in existence when a railroad is built, but as well streets and highways created subsequent to the construction of a railway.

Your Commission is further advised that the power so conferred upon the Common Council extends to requiring the removal of all steam railroad tracks from the surface of the streets and highways of the city and to granting permission to the owners of such tracks to elevate the same above the surface of the streets, or to carry the same beneath the surface of the streets, or to carry such streets and highways over or under such tracks by means of viaducts or subways, so far as it may deem advisable.

Your Commission is fully convinced, from the advice of the law officers of the city, that the Common Council possesses the most ample and unquestioned powers for the protection of the public interests with respect to the streets and highways in the city.

IV.

It being, therefore, not only within the power of the Council, but its duty as well, in the protection of the public interests, to adopt some means to that end, we are brought to the consideration of several plans which are possible from an engineering point of view.

(*a*) The Subway Plan.—The surface of the City of Chicago is so near the level of the water in the lake, that any subway plan involves an excavation for the

railroad tracks, which must be over twenty feet below the surface of the lake, in order to escape contact with sewers, gas pipes, water pipes, etc., and secure sufficient head-room for the movement of trains. This would require the placing of the rails in the track so that the surface of the rails will be not less than thirty feet below the surface of the streets.

Drainage of the track would be necessary, and could only be secured by creating large reservoirs at stated intervals, and operating the same by steam pumps.

In addition, the discomforts to passengers arising from insufficient ventilation, coal smoke, etc., would make travel almost unendurable, besides which, the cost of construction, maintenance and operation, would largely exceed that of either of the other plans.

This plan may, therefore, be laid aside as wholly impracticable.

(*b*) Viaduct Plan.—The topography of the City of Chicago is such that the streets and highways in their natural condition are practically level, and in the exercise of the powers conferred and the duties imposed upon the Common Council, as above stated, they should be preserved in the same condition to the public use, unless there are controlling reasons to the contrary. The construction of viaducts requires for the protection of the lives of those operating the trains of the railroad companies head-room of about twenty feet between the top of the rail and the lowest projection of the viaduct above. This means raising the street above its natural level not far from twenty-two feet.

As there are within the limits of the city, more

than fifteen hundred intersections of streets and highways by steam railroad tracks, consisting of from two to eighty parallel tracks, it will be seen that the adoption of the viaduct plan would involve the creation of a large number of steep hills in the streets, thus constituting a serious obstruction and interference with their free and proper use by those for whose use they were created, besides seriously injuring adjacent property.

In addition to the injuries which the public would suffer from the artificial inequalities thus raised in the streets and highways through the diminution of the loads to be moved, and the interference with rapid transit, the damages for which the railroad companies would be liable, arising from the change in the grade of the streets to owners of the property abutting on the streets where these changes occur under the provisions of the constitution of this State, relating to compensation for property damaged, as well as property taken, make this plan, in view of your Committee, extremely objectionable and unsatisfactory to the public.

The total amount hitherto expended for the few viaducts built in the city is nearly four millions of dollars, to which the city has contributed more than one-third, and is sued for damages to property abutting on the viaducts and approaches for an amount aggregating more than a million and a half dollars. The amount hitherto expended, and the liabilities incurred on account of the few existing viaducts, shows, in our judgment, that that system will involve a very large outlay.

In addition, the cost of maintenance, renewal and

repair of any considerable number of viaducts would involve a large annual outlay.

It is suggested in the interest of some of the railroad companies, that this plan could be somewhat simplified and the expenses reduced by closing a number of the streets crossed by the railroad tracks.

But we cannot but believe that the public interests would suffer very much thereby; experience has shown that in a great and growing city, like the city of Chicago, all the streets and highways are absolutely required for the public use, and in addition to this, the large damages which owners of property abutting upon streets which are turned into cul-de-sacs by that plan, would be altogether disproportionate to any good that would flow either to the public or to the railroad companies.

(*c*) Depression of the Streets Below the Railroads.—As the head-room for the streets, if depressed below the railroad tracks, requires fourteen to sixteen feet, and as many of the sewers are placed about seven feet below the surface of the streets, this plan is, therefore, and for the reasons stated in plan *a*, entirely impracticable.

It is obvious that a plan which would involve the entire reconstruction of the sewerage, water and gas systems of the city, cannot be adopted, and need not be further considered.

(*d*) Modified Plan, So-called.—A plan has been somewhat discussed which involves the partial elevation of the railroad tracks, and the partial depression of the streets; that is to say, the elevation of the railroad tracks about eight feet, and the depression of the streets an equal distance from their present level.

This plan, so far as the depression of the streets is concerned, embraces substantially all of the evils of all the plans already referred to, and especially the disarrangement of the sewerage, water and gas pipe systems of the city.

In addition to this, it is extremely objectionable because it prevents the utilization of land beneath the railroad tracks, at points where its use is demanded for storage and other business purposes.

In connection with this plan the suggestion has also been made that certain streets be vacated. We have already adverted to the objectionableness of this feature, and our remarks need not be repeated here.

This plan would also involve the damages which abutting owners would suffer and be entitled to recover under the constitutional provision above referred to, arising from changes in the established grades of the streets.

(*e*) The Elevated Plan.—This plan contemplates the entire separation of the traffic of the streets from the traffic of the railroads, thus securing the restoration of the streets and highways of the city to all the uses and purposes for which they were originally created. This, in the opinion of your Commission, is the only plan which is sufficiently comprehensive to meet all the requirements of the present and the future of this city.

Any plan to be satisfactory must provide not only that existing restrictions be removed, but must also admit of the widest development and expansion of the traffic upon the streets and highways of the city and the railroads entering it.

In dealing with this problem, which is, beyond

question, the most important one confronting this city in its business and other interests, any partial solution, which will be merely a tempory makeshift, will be altogether unacceptable to the public and unwise in every respect.

As Chicago is now one of the most important railroad centers of the world, and is clearly destined in the near future to lead all other cities on this continent in the struggle for commercial supremacy, we believe that this question should now be dealt with on the most comprehensive basis once for all.

Your Commission are of opinion that at an early day the government of the city should take steps to cause the different railroad companies now occupying the streets and highways of the city with their tracks, to remove the same and restore the streets and highways to the same uses for which they were originally intended.

The present crowded condition of the streets, the difficulty in transacting business, and the certainty of a large increase in the volume of travel, trade and business upon the streets in all parts of the city, make this plan an imperative necessity.

In making these recommendations, your Commission are not unmindful of the expense and inconvenience which will be occasioned by their adoption, but we are of opinion that these disadvantages will be more than overbalanced by the increased facilities which the railroad companies will have, and the diminished expense of maintenance and operation of their lines. It is an undeniable hardship to railroad companies which have but recently constructed expensive viaducts by order of the city authorities, to

now be compelled to adopt other and different plans for protecting the public interests in the streets of the city, but, as above stated, your Commission are of the opinion that these individual instances ought not to stand in the way of the public interests, which demand a more perfect and comprehensive system. Besides, it must not be overlooked that the viaduct system of the city is at present only in its infancy, and if pursued as a permanent policy, hundreds of others must be erected at an expense enormously greater than has been incurred up to the present time.

In addition, the greater number of viaducts already constructed were constructed at the joint expense of the railroad companies and the city, and there are now pending suits against the city in behalf of abutting property owners injured by the change in the grade of streets, resulting from the construction of these viaducts and approaches, aggregating one and one-half millions of dollars, from which the city and the railroad companies would be relieved by the adoption of the elevated plan. It is perfectly manifest that the location of the railroads within the city limits relatively with each other, and the topography of the city, are such in the different districts, that the elevated plan in one portion and the viaduct or a different plan, in another portion, cannot be successfully carried out, with a due regard to all interests.

Another element to be considered in connection with this subject is the great expense indispensable in the maintenance and renewal of viaducts which, as we have been informed, has in whole, or in part, been assumed and hitherto paid by the city. We

have no hesitation whatever in expressing the confident opinion, that in view of existing conditions, and taking into consideration the future growth of the city, and its commercial interests, the plan which we recommend will be cheaper, better, more efficient and more satisfactory than any other. The experience of eastern cities in the United States and of all the large cities of Europe, confirms this opinion.

The City of Chicago, more than any other, requires and demands the best and most improved facilities known to modern science.

Your Commission do not feel that it is required or warranted in going voluminously into the minute details of the plan which they recommend. They deem it sufficient to say that in their judgment, as confirmed by the experience of the city authorities of Philadelphia and other cities, the elevated railway should be so constructed as to leave not less than sixteen feet in the clear between the top of the curb and the lowest projection of the elevated railway.

They also believe from the investigations which they have conducted that there will be no serious difficulty in accommodating the industries of the city by the elevated plan. It is believed that industries now enjoying railway facilities can be rearranged with but little expense so that they may be accommodated with railway facilities, and that when so rearranged, the business may be transacted much more expeditiously and economically.

Freight houses, several stories high, can be built and so arranged that cars may be run to any story by means of hydraulic lifts and switches, and handled by hydraulic power, thus dispensing with the

expensive and cumbersome methods and appliances now in use.

It is well known that in convenient localities the lands necessary for freight-house purposes command high prices, and railroad companies can scarcely afford to own the lands required for terminal purposes, when they have only the use of the surface of the lands for the purpose, whereas the plan which multiplies this by the use of many stories, reduces the capitalization necessary for furnishing the public the facilities required.

A number of the streets in the city are occupied lengthwise by railroad tracks, in many instances entirely excluding the public therefrom.

We are advised by the Corporation Counsel that the Supreme Court of this State has recently decided that the City Council has no authority to permit or grant the right to railroad companies to use the streets to an extent which excludes the public therefrom.

We are further advised that this decision was made in a case concerning the use of Archer avenue in this city, which is now occupied lengthwise by the Chicago, Madison & Northern Railroad Company (a corporation owned or controlled by the Illinois Central Railroad Company and the Atchison, Topeka & Santa Fé Railroad Company, the interest of the Atchison, Topeka & Santa Fé Railroad Company having passed to the Chicago Elevated Terminal Railway Company; under which the Atchison, Topeka & Santa Fé Railroad Company is now using the same).

The distance which this street is thus occupied is about 1,450 feet; and, in our judgment, immediate

steps should be taken to recover the use of all the streets in the city so occupied.

The necessity for early and prompt action in reclaiming and recovering the use and possession of streets occupied lengthwise by railroad tracks is emphasized by the effect of delay on the part of the city, which, as your Committee is informed, resulted in its losing valuable rights in the litigation between the city and the Illinois Central Railroad Company.

Attention is also called to the fact that one or more of the railroad companies entering the city are now claiming a portion of Clark street as belonging to them, and have erected walls in the street for the purpose of emphasizing that claim.

Railroad companies can, undoubtedly, by agreement, greatly reduce the expense to themselves of the improvements in question. If they can reconcile their respective interests, they will be able in the districts referred to, to come in together in parallel lines to a joint passenger depot, and create freight houses and other terminal facilities, and relieve much of the property now owned or occupied by them, so that it may be used for business and other purposes.

The lines in the Southern District, so-called, could stop at Twenty-second street, and join in the erection of an elevated union passenger depot (the same as is now done on the surface on the West Side, at Canal and Madison streets) of a size, plan and character sufficient to accommodate all the business they now have or would be likely to have in the future, thus relieving a large amount of property lying north of Twenty-second street, now used by them, and which is demanded at the present time for business pur-

poses, and relieve the city from the necessity of constructing the extremely high buildings now in the course of construction on account of the circumscribed area to which business is confined at the present time.

The lines of the West Side, North Side and South Side Districts, so-called, should be excluded from the streets within the following boundaries, to wit: On the west, by the west line of Canal street, on the north by the north line of Kinzie street, and on the south by the south line of Twenty-second street.

We have had the valuations fixed, by the Valuation Committee of the Chicago Real Estate Board, of the real estate (excluding all improvements) lying between Madison, Twenty-second, State and Canal streets, owned by the railroad companies, containing 11,616,719 square feet, and submit herewith their certificate showing the value of said real estate at the present time to be upward of fifty millions of dollars, together with maps of such real estate.

The amounts which the railroad companies could thus realize from the sale of the lands owned by them which would be unnecessary for use under the foregoing plan, would go far toward defraying all the expenses to which they would be put for the improvements in question.

It ought, perhaps, to be mentioned that inasmuch as the Common Council has granted to the Chicago Elevated Terminal Railway Company the right to construct, maintain and operate an elevated railroad as far north as the south line of Twelfth street, that the other railroad companies on the South Side should not be restricted to Twenty-second street, un-

less the Chicago Elevated Terminal Railway Company shall also be restricted in the same manner.

The St. Charles Air Line Railroad Company, a corporation owned or controlled by the Chicago, Burlington & Quincy Railroad Company, the Chicago & Northwestern Railroad Company, the Illinois Central Railroad Company, and the Michigan Central and Lake Shore & Michigan Southern Railroad Company, owns side tracks extending from the south branch of the Chicago river to a point of connection with the Illinois Central Railroad track east of Michigan avenue to a point between Fifteenth and Sixteenth streets, which crosses many important streets, and is exclusively used for transfers.

Inasmuch as the elevation of this railroad would interfere with the Alley Elevated Road, which is now in operation from a point near Van Buren street, south to Fortieth street, and is destined to be one of the main passenger lines of the city, and inasmuch as the railroad companies entering the city have substantially all become owners of the Chicago Union Transfer Railway, and as the latter has established facilities in the suburbs in the city for the interchange of freight traffic between all the railroads entering the city, to remove as far as possible from the business portion of the city the transfers between them, and inasmuch as the traffic interchanged between the Chicago, Madison & Northern Branch of the Illinois Central and its main line can be effected, as far as its freight business is concerned, through the instrumentality of the Chicago Union Transfer Railway, and so far as its passenger business is concerned, by the Belt Lines exist-

ing in and about the city, and inasmuch as we are not able to find the said St. Charles Air Line R. R. Co. has any right to maintain said tracks permanently, we recommend that the same be removed.

All that portion of the tracks of the Union Stock Yards & Transfer Company lying east of their present connection with the Lake Shore and Rock Island Companies should be absolutely removed, as there is no longer any use for their continuance east of that point, there being connection between their tracks westerly therefrom and all railroads entering Chicago either directly or through the instrumentality of the various Belt Lines; and the remainder of the tracks of this company, inside of the city limits, should be elevated, as their connecting lines are required to elevate, as above recommended.

The adjustment of matters by the railroad companies among themselves so as to come in in groups in parallel lines would entirely do away with the vast expense and great danger now arising from the vast number of complicated and dangerous intersections now existing in the City of Chicago.

It is remarked among railroad men that the most complicated network of railway intersection in the civilized world is to be found in the City of Chicago. The delay occasioned thereby, the expense resulting from the construction and maintenance thereof, the great number of collisions and the consequent injury to persons and property which have resulted therefrom, suggest in the strongest terms the necessity of adopting measures for relief.

Another great advantage gained from the elevated plan will be the impossibility of persons getting

upon the tracks and endangering their lives, and those of persons upon the railway trains.

Every one is familiar with the custom of people using the railway tracks as a highway in passing from point to point.

The elevations which the foregoing plan contemplates could be accomplished in sections and gradually, so as to relieve railroad companies, as far as the public interests will permit, from an immediate outlay for the entire work.

In conclusion we desire to say that we have carefully examined the terminal facilities of the most important railroad companies of the United States in the largest cities, including Philadelphia, New York, Jersey City, Boston and Rochester.

We have consulted eminent engineers, leading railway men of the United States, the publications of the important railways of Europe, and especially the portions bearing on elevated tracks and elevated terminal facilities.

We have examined large warehouses in New York City, operated by hydraulic power, owned by the leading wholesalers, where elevators are used for transferring teams from story to story, and have given the entire subject our best thought, and have devoted nearly our entire time, since our appointment, to the subject, and we are fully convinced of the entire practicability of elevating railroad tracks and terminal facilities within this city, and that it is decidedly the best plan which can be adopted in this city, for the best interests not only of the public, but the railroad companies themselves.

Elevated railroads and elevated terminal facilities are no longer an experiment; experience has demon-

strated that they are the most efficient and economical method of handling a large and extensive business in a city whose business is so large and varied as that of the City of Chicago.

All the materials for the construction of elevated railroads and terminal facilities are erected, and cheaply too, by manufacturers within the City of Chicago.

Elevated railroads would enable quicker transit between the business portion of the city and its suburbs; the danger now existing at street intersections would be entirely removed; the proneness of people to make a thoroughfare of railroad tracks would be entirely done away with, and all the grievous loss of life and injury now existing would be entirely stopped, and all the vast expense to which railroad companies are now subjected for policing their tracks, the establishment and operation of gates, fences, guards, watchmen, lights, etc., would be entirely avoided.

The expense of handling freight traffic, with the new and improved terminal facilities above suggested, would be largely reduced.

We submit herewith two opinions of the Corporation Council of this city, which have already been referred to in the foregoing.

Having now accomplished the purposes for which we were appointed, as far as lies in our power, and thanking the Common Council and his Honor the Mayor for the confidence reposed in us, we submit the foregoing as our final report, and beg to tender herewith our resignations.

Dated, Chicago, Ills., July 11, 1892.

(Signed) GEO. HACKNEY.
E. S. DREYER.
FRED S. JAMES.

CHICAGO, March 24, 1892.

John S. Miller, Esq., Corporation Counsel, City Hall, City:

DEAR SIR—Is there any decision by the court regulating the laying of railroad tracks in our public streets, and have the railroad companies a right to lay tracks and occupy the public streets of Chicago? Have the Council a right to grant permission to a railroad company or other corporations to lay tracks in said public streets? We have noticed in the press that the Supreme Court of the State has rendered a decision on this subject lately.

A delegation of citizens has called upon us lately to get us to recommend the laying of about twenty-five additional tracks on the Chicago, Pittsburg & Ft. Wayne line and 51st street. Should we recommend the request of the Ft. Wayne Co. it will become necessary for us to also recommend that said railway company shall be allowed to lay their tracks on a number of street crossings.

An early reply to the above questions will greatly oblige

Yours truly,

GEO. HACKNEY, Chairman.

CHICAGO, March 28, 1892.

George Hackney, Esq., Chairman, 1306 Chamber of Commerce:

DEAR SIR—In reply to yours of the 24th, in regard to the right of railroads in the streets, I beg to say:

Railroad companies have no right to lay railroad

*

tracks in or across the public streets without the authority of the City Council. The City Council has the power, however, to grant such permission, such power being limited as hereinafter mentioned. This power is contained in the city charter. The charter provides, however, that the City Council shall have no power to grant the use of or right to lay down any railroad tracks in any street except upon the petition of the owners of land representing more than one-half of the frontage of the street or so much as is sought to be used.

The City Council would have the power by ordinance to grant the Pittsburg, Ft. Wayne & Chicago Railroad Company the right to lay the tracks you speak of across the streets in question.

This power of the City Council has been recognized by the Supreme Court in numerous decisions.

Moses v. *Pittsburg, Ft. Wayne & C. R. R. Co.*, 21 Ill. 516.
St. Louis, A. & H. R. R. Co. v. *Bellevnlle*, 20 App. Ct. R. 580.
Chicago Dock Co. v. *Garrity*, 115 Ill. R. 161.
Olney v. *Wharf*, 115 Ill. R. 520.

The City Council cannot, however, grant to the railroad company an exclusive use in the streets, so as to give it the right to exclude the ordinary public travel on the streets, but can only give such a use as may be consistent with and still permit such ordinary travel with reasonable safety and convenience.

The late case to which you refer, is, I apprehend,

the case of *Ligare* v. *City of Chicago.* In that case the Supreme Court laid down the principle last mentioned, and held an ordinance, giving the Chicago, Madison & Northern R. R. a right on a portion of Archer ave. to be void, because that ordinance, as the Supreme Court held, assumed to give the railroad company an exclusive right in the street over the right of public travel, and so as to exclude public travel from that portion of the street.

Yours truly,

JOHN S. MILLER, *Corporation Counsel.*

OPINION OF CORPORATION COUNSEL MILLER REGARDING ELEVATED TERMINALS. SUBMITTED TO THE SPECIAL COMMITTEE OF THE COMMON COUNCIL, SEPTEMBER 19, 1891.

GENTLEMEN—You ask my opinion as to the power of the City Council (1) to require railroad companies to elevate their tracks, or (2) to require them to conform their tracks to the grade of streets. In my opinion the council has, in each case, such power.

The charter of the city gives the power to the City Council, among other things, "to provide for, and change the location, grade and crossings of any railroad" (art. 5, sec. 1, clause 25), and "to require railroad companies to provide protection against injury to persons and property in the use of such railroads," and "to compel railroad companies to raise or lower their tracks to conform to any grade which may at any time be established by the city." (Ld., clause 27.) I think these provisions of the charter cover the ground, and they are valid as a grant of police power

even as against the railroad companies whose tracks existed in or crossed the streets of the city at the time of the passage of the act. Of this grant of power to provide or change the location, grade and crossings of railroads, the Supreme Court has said that "the law leaves to the discretion of the City Council the question as to the cases in which the power shall be exercised and the question as to what provisions shall be made upon the subject in each case. Over this discretion the courts have no contol." (*C. and W. I. R. R. Co.* v. *Dunbar*, 100 Ill. 135; *Tudor* v. *Chicago and South Side Rapid Transit Co.*, not reported.) This power refers to the location of the railroad upon the property of the company as well as the grade and crossings of streets, and the power of the railroad companies to locate their line is, in cities incorporated under the general law, subject to such provision in this respect as the City Council may lawfully make. The City Council is also given the power by the charter "to regulate the use of the streets" and "to pass and enforce all necessary police ordinances." This is a grant of all necessary police power, which is to pass and enforce any ordinances of laws within the limits of the city which are reasonably necessary to the public safety, health and welfare. Such power in the City Council are inalienable. From such police powers, when properly exercised by the Legislature or City Council, even vested private rights are not exempt.

But the property and business of railway companies are "clothed with a public interest;" in the language of the Supreme Court of the United States, "submit to be controlled by the public for the com-

mon good." (*Munn* v. *Illinois*, 94 U. S. 126; *Georgia Banking Co.* v. *Willenberg*, 117 Ill. 203.) The public control for the common good, within the city and as to the matter in question here, is clearly vested in the City Council. It extends so far as may be necessary to protect the public against danger.

Railways in this State are declared by the constitution of the State to be public highways, and are as such subject to regulation and control by public authority. (Constitution, art. xi., sec. 12.) The streets of the city are held in trust for the use of the entire public, and the grant to railroad companies of the right to use or cross streets is justified in law upon the ground that such use is one of the proper public uses of the streets. But such rights of railroad companies is public right, and must be always subject to such conditions and regulations as shall, in the judgment of the government authorities, be reasonably necessary for the common good. The authority here is the City Council, and its power to regulate and control such uses of the streets for the best interest of the entire public is exclusive and ample. The doctrine of the vested rights has no proper application to the rights of railway companies in their use of public streets. It is vested private rights that are protected by the constitution from invasion by legislation. It is private property that the constitution provides shall not be taken or damaged for public use without just compensation. These constitutional guarantees do not apply to save public rights from control by the public for the common good. There can be no vested right in a public agency which saves it from governmental control. There can be no vested right in a

railway company (whose business and property are *publici juris*, and whose road is a public highway) to the use of the public streets of the city which is not subject to such regulations and legislation as the necessity of the public who travel such streets may, in the judgment of the City Council, reasonably require.

The power above mentioned applies, in my opinion and for reasons above given, to streets laid out and now existing over the right of way of a railroad company, as well as to streets existing when the railroad track was laid.

There is another principle of the law that I think ample in the premises. It is that where a railroad company is given the right to cross, to lay down and operate its tracks upon a public street, such right does not authorize it to appropriate any part of the street to the exclusion of, or material interference with, public travel thereon. With the grant of such rights, there is imposed upon the railroad company the duty to restore the streets so that it may be safely and conveniently used by the public, and to maintain such necessary structures as to do whatever is required to make the streets reasonably safe and convenient for public travel. This duty is a continued one, and requires that that be done from time to time, which, under changing conditions as they may arise, is reasonably necessary. It is not satisfied by making the streets safe and convenient at the time that the track is laid or at any one time; but whenever, by reason of the increase of its own traffic or of the public travel upon the streets, anything further or additional becomes necessary to make the streets so safe and convenient, it is the duty of the railway company to make

such alterations as may meet the needs of the public who have occasion to use the streets. The above principle, as applied to the streets as existing when railroad tracks were laid, does not depend upon any statute, but, as stated by the Supreme Court of Illinois, "is a well settled principle of the common law resting upon the obvious considerations of justice." (*People* v. *C. & A. R. R. Co.*, 67 Ill. 119.) It is, however, expressly provided by statute in this State that "hereafter, at all the railroad crossings of highways and streets in this state, the several railroad corporations in this state shall construct and maintain said crossings and the approaches thereto within their respective rights of way, so that at all times they shall be safe as to persons and property." (Rev. Stat., chap. 114, sec. 41.) This, applied as to streets existing when the tracks were laid, adds nothing to the common law duty. It extends it, however, to streets afterward laid out. And such an act is constitutional. (*Ill. Cen. R. R. Co.* v. *Willenberg*, 117 Ill. 203; *Portland, etc., R. R. Co.* v. *Deering*, 78 Me. 67.)

Under this common law principle it is the duty of the railroad company to do whatever may be necessary to make the street safe and convenient, as near as reasonably may be, as it was before the railroad was laid thereon, or it would be if it were not there. If, in order to accomplish that result, it is necessary that the tracks upon the streets should be raised or lowered, and the streets constructed and maintained below or above the tracks of the railroad company, in my opinion such duty would require the railroad to make that change.

It is plain that in the case of very many streets

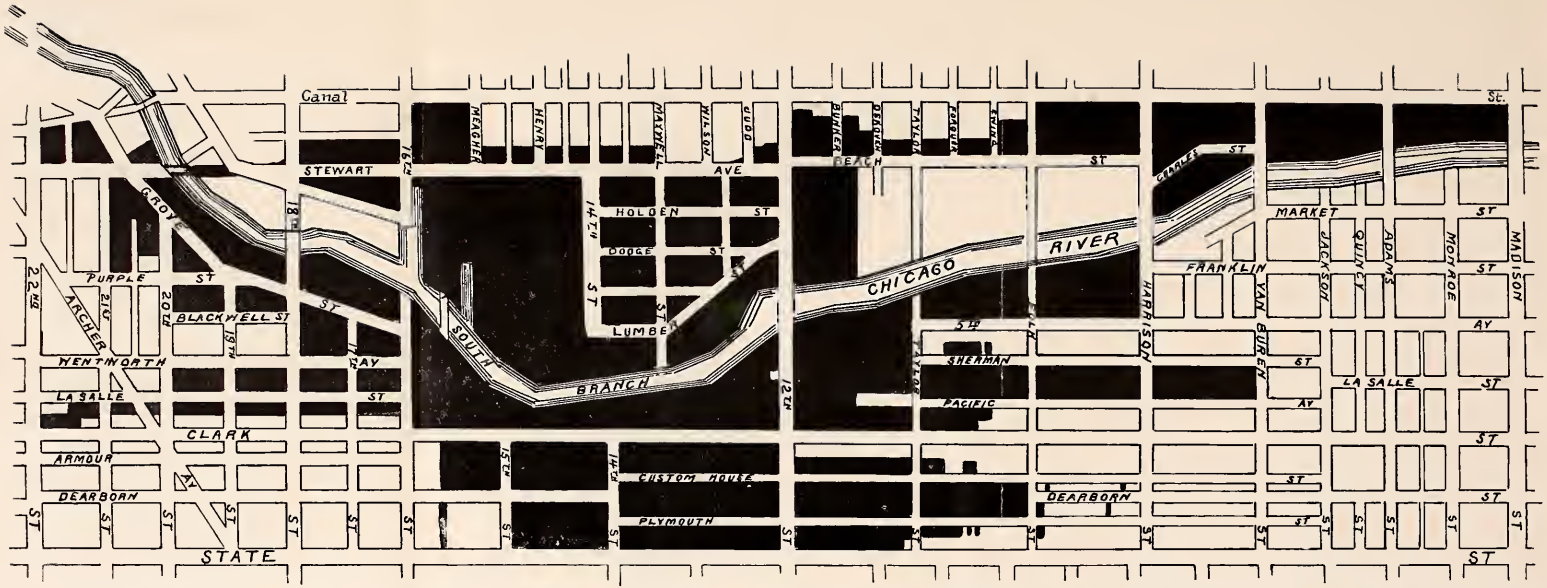
of Chicago which have been crossed or occupied by the tracks of one or more railroad companies to the use of the streets by the railroad and the necessity of public travel thereon are such that this restoration of the streets could only be accomplished by doing away entirely with crossings at the grade or other occupation of the surface of the streets by railroad tracks. In case of some streets this has not been accomplished at all, and the result is that the streets or portions thereof have been appropriated by the railroad companies and the public travel thereon wholly or almost wholly excluded. In the case of crossings of many streets the city has, in order to restore the streets to a safe condition, erected viaducts at a great expense, carrying streets over railroad tracks. In some cases, where ordinances granting railroad companies the right to cross streets have been passed in recent years, the ordinances have provided for the payment by the railroad companies of the expense of constructing viaducts. In the case of railroad companies having older ordinances, no such provision for the payment by the railroad company of the cost of viaducts was inserted in the ordinance. Railroad companies having such older ordinances have denied any legal obligation to construct or pay for viaducts over their tracks, but have in many cases "voluntarily" contributed a comparatively small portion of the expense. Suits are pending, however, against several railroad companies to recover such expense.

In my opinion, under the common law principle above cited, by which it is the continuing legal duty of railroad companies laying their tracks across or upon existing streets to restore and maintain the

streets so that they shall be reasonably safe and convenient for the public travel—substantially as capable of free and proper use by the public as they were before—such railroads shall be compelled to build viaducts or bridges and sufficient approaches to carry the streets over their tracks, and to pay all land damages where such means are reasonably necessary so to restore such streets and make them safe and convenient. That has been held in several cases in other States (*State* v. *St. P. M. and M. R. R Co.*, 35 Minn. 131; *State* v. *St. P. R. R. Co., and N. R. R. Co.*, 38 Minn. 246; *State* v. *Mo. and St. P. R. R. Co.*, 39 Minn., 219; *State* v. *Mo. and P. R. R. Co.*, 35 Kansas, 171; *L. and N. R. R. Co.* v. *State*, 3 Head, 524).

And upon the same principle I think they may be compelled to raise or lower their tracks in case such means are reasonably necessary to restore the streets. In other words, the legal duty of the restoration is only complied with when that is done, whatever it may be, which is necessary to make the streets reasonably safe and convenient for public travel. And in my opinion the City Council, under the provisions of the charter above mentioned, is vested with the power to determine the manner in which railroads shall so restore the steets and the occasion thereof.

Of course the ordinance of the City Council must be reasonable. But within that limit there is a wide field for the exercise of its legislative discretion, with which courts will not interfere. And upon a subject of this character, which is one calling for the exercise of the legislative rather than the judicial discretion and judgment, it is largely for the City Council to



The area shaded in black represents the property used for railroad purposes, upon which a valuation of over $50,000,000 is placed by the Valuation Committee of the Chicago Real Estate Board. This map does not show the portions of streets occupied by tracks of steam railroads. The Chicago Terminal Commission recommends that all steam railroad tracks should be removed from the area bounded by Canal Street on the west, Kinzie Street on the north, and Twenty-second Street on the south.

determine what is reasonable, and with its determination a court will be reluctant to interfere.

An ordinance applying to one or two railroad companies whose tracks occupy or cross certain streets, would not, in my opinion, be necessarily void, because it was so limited in its application, and because other railroads, occupying other streets, or with different conditions, might be omitted therefrom or required to do something different. While all laws should be general in their operation, it is only required that they apply to all in like situation, and all placed in the same city do not necessarily require the same local regulation. One regulation might be proper in the case of one street or district of the city, and another regulation in another street or district. It is the province of the City Council to make the necessary discrimination in this particular. (*Railroad Co.* v. *Richmond*, 96 U. S. 529).

Respectfully submitted,

JOHN S. MILLER, Corporation Counsel.

CHICAGO,, June 29th, 1892.

The Chicago Terminal Commission, Chamber of Commerce Building, Chicago:

We, the undersigned, members of the Valuation Committee of the Chicago Real Estate Board, have carefully considered your application for a valuation of the property in this city, as shown by the maps submitted to us and hereto attached, being the railroad land located between Madison and Twenty-second streets, and State and Canal streets, and containing 11,616,719 square feet.

In our judgment the present value of said railroad land, without improvements, and provided all railroad tracks are removed, is fifty millions, two hundred and seventy one thousand, three hundred and twenty-six dollars ($50,271,326.00).

Signed: WILLIS G. JACKSON,
JOSEPH DONNERSBERGER,
EUGENE H. FISHBURN,
WILLIAM A. BOND,
GEORGE BIRKHOFF, JR.

Valuation Committee of the Chicago Real Estate Board.

APPENDIX.

Containing Information in Relation to the Chicago Railway Terminal Problem, from Engineering, Legal, and Other Standpoints.

Report of George H. Reynolds, Consulting Engineer, upon the Economy and Use of Hydraulic Power and Machinery at Railway Terminals in Europe.

Chicago, May 10, 1892.

To John A. Roche, Vice-President Crane Elevator Company:

Dear Sir—Pursuant to instructions from you, I left New York on the 17th of February, to visit England, France and Scotland to investigate the subject of Railway Terminals and the methods there employed for handling cars, freight and passengers. On my arrival in Liverpool on the 27th of February, I at once began my investigations, which were continued uninterruptedly until the 7th of April, when I sailed for New York.

During this time I visited all the principal railway stations of England and of Paris, and all of the principal docks of London and Liverpool, the Mersey Tunnel Railway, the Electric Underground Railway

of London, the London Hydraulic Power Company's works at London and Liverpool, and also made thorough investigations of the Compressed Air System as used in Paris, and also the Compressed Air System of Birmingham, England. I had expected at first to confine my investigations wholly to hydraulic machinery, but I found it necessary to go into many other subjects which are intimately connected with the uses of hydraulics.

This communication is intended only as a preliminary report upon the Terminal Railway Systems as they are arranged and operated in the countries named, and is based upon my personal observations and knowledge gained from the railroad officials and from the workshops where the operating machinery of these terminals has been built. As this report is intended to be only preliminary, and to give a general idea of what is being done with hydraulics at the places visited, it will not be accompanied with drawings illustrative of the various devices which I have seen in operation and which are here described. But when I make my final and full report it will be accompanied by drawings in detail of all the machines which are treated of.

RAILWAY TERMINALS.

These terminals in all of the principal cities may be divided into three classes :

Class 1. Where the cars come into the stations on grade of the streets.

Class 2. Where the cars come in above the street level, and are lowered to the street level for the pur-

pose of unloading and loading, and are again raised to the upper level for dispatch.

Class 3. Where the cars come in below the street level and are raised up to the street level for the purpose of unloading and loading, and again lowered to the lower level for dispatching.

Prominent examples of the first-mentioned class are found at Paris in the Batignolle station, the Forth station at Newcastle-on-Tyne, and Camden station, London. At the Forth station, while it is true that the cars are received and dispatched from the street grade level, use is made of the entire area below the floor of the station for the storage of beer, butter, cheese, and articles which require to be kept cool, these articles being lowered from the station through convenient trap-doors, and are raised again by hydraulic power to be delivered. At the Camden and Batignolle stations no use is made of the parts below the tracks.

A good example of Class 2 is found at the London and Northwestern Railway Company's Broad Street station, at St. Pancras, London, and the St. Lazare station, Paris. And of the 3d Class, at White Cross station, Midland Railway, London.

In the methods employed for handling cars and freight in these three classes of stations above described, there is a general sameness; that is, the transportation of freight, so far as the railway proper is concerned, ends when the train is delivered in the yard. From this time onward until the train is again made up to be pulled out of the yard, the entire handling of cars and train is done with hydraulic power. The cars are hauled along the track, are

turned around and sent across the yard to any other track, in fact, are moved in any and all directions, any car being taken out of any part of the train and put on any other track in the yard without the use of switching engines, and with very little disturbance of the general work going on over the whole yard. This is accomplished by a system of turn-tables, transfer-tables, capstans, cranes, and car hoists, these latter only being used where it is necessary to move the cars from the upper to the lower levels, or vice versa, as is the case in Classes 2 and 3 of the stations named.

APPLICATION OF HYDRAULIC POWER.

Hauling Goods.—The method of dealing with goods, either in receiving or delivering, loading or unloading, or in transit, as performed by hydraulic cranes, lifts, capstans, traverses and turn-tables, is as follows:

By Traversing.—On receipt of a train in a goods-shed, the cars are sorted for the various districts in which they are to be delivered, by means of a traverse, which is a traveling section of the road running on wheels and hauled either by rams and chains under the flooring, for short distances, or, when the distance to be traversed is longer, by capstans, which are so conveniently placed as to most readily command the station without being in the way. The traverse, with its car, is thus shifted from the main arrival line to any other portion of the shed or yard where it is required, or by turn-tables and capstans, where the traverse is not used.

Hoisting and Lowering. — If it is required to

descend to a lower level, the car is hauled off by capstan power and placed on a hoist, by which means it is lowered to that level in the building in which it is required, and again hauled into position for unloading by cranes, which are usually of 1,500 to 2,500 pounds lifting power.

Turn-Tables and Capstans.—Where turn-tables are employed, in the case of single turn-tables, that is, those with single tracks only over them, gearing is dispensed with, and the rope of an adjoining capstan is hooked on to the car and the table pulled round to the position required. Where larger turn-tables with double roads, on which two cars may be taken on abreast, are employed, they are traversed round by a pinion wheel, engaging in a circular rack which goes around the outer rim of the table. It is put in or out of gear by a clutch movement, and hydraulic power is used.

Power.—The power obtained for working this machinery is supplied by direct-acting pumping-engines, which are horizontal or vertical, as may be required, this being a matter of space and grouping. The engines are direct acting, that is, with the pump and piston rods coupled on the same axis central line; the suction pipe leading to the pump barrel is coupled on to the supply main, which again terminates in a receiving tank, or receiver attached to the company's or city mains, as the case may be. This tank is placed above the level of the pumps, and the delivery pipe from them connected direct to the bottom of the stalk of the accumulator, which in its turn is again connected to the main delivery leading to the cranes, capstans, hoists, etc.

Accumulators.—The accumulator ram is weighted to a maximum of 750 lbs. per square inch, so that when it is pumped up (floating) the weight in the delivery mains represents that pressure.

Ram Movements.—The whole operation of the hydraulic machinery, however placed, is in principle the movement obtained from rams, whether it be in capstans of quick action, or in hoists and cranes, in which the movement is much slower.

Anchor Pulleys.—The efficiency of the application of hydraulic machinery in capstan working, is materially affected by means of snatch heads, or anchor pulleys, placed in suitable positions. By the use of these snatch heads, one capstan is rendered capable of pulling a car in any direction.

Freezing.—The universal testimony of all of the engineers at the various stations and docks in England where hydraulic power is used, is that no trouble whatever has ever been experienced by them on account of frost, even with the temperature at zero, provided that in such severe weather during the night time, or when the machinery is not in operation, the water is allowed to slowly circulate around through the pumps. The engineer of the Midland Railway, who has had charge of their machinery for many years, stated that by leaving one capstan running slowly on the entire system of many miles of pipes, no freezing had ever taken place.

At all of the railway stations along the docks, unless the distance traversed by the hydraulic mains is very great, the water, when discharged from the various machines, is returned through suitable pipes back to the pump-room, where it is delivered into

receiving tanks to be again pumped under the accumulators and again sent through the system, so that the amount of water actually consumed is only that which may be due to leakage, and this is not of sufficient amount to be taken into consideration.

Pipes.—The pressure pipes in all cases are made of cast-iron with joints bolted together; while all of the return pipes are ordinary cast-iron water pipes with socket joints.

Traverse-Tables.—The traverse-tables used are made of wrought iron or steel, strongly bracketed, the ends fitted with hinged deflecting points to make an easy ascent for the car.

Capstans.—The capstans in use at the terminal stations of railways and along the docks are of considerable range in power, varying from one to five tons direct pull upon a rope. All of the various types show great ingenuity in their adaptation to the work to be done by them, and in the very ingenious contrivances for economizing the use of water.

Car Hoists.—The car hoists as used at the Midland Railway I consider the best of their kind which I saw. These hoists are fitted with three rams each of different size — the smaller of the three being always open to the pressure of the main, and counterbalancing the weight of the table and the other two rams. The second is a little larger, and is sufficient as an auxiliary to lift the ordinary freight car with its load, or, say, fifteen tons; and the larger ram will, with the assistance of the other two, lift any weight up to twenty-five tons, and is so arranged that when not required it will fill its cylinder by suction, and

thus give a firm and rigid wheel-base for wagons that may be passing over the platform.

The framing of the platforms of these car hoists is made of steel structural beams, firmly riveted together, and is capable of standing the severest uses.

Platform Cranes. — These are placed at convenient distances upon all of the platforms where freight is to be received or delivered, and are in power from 15 to 30 hundred weight capacity as a general rule. Many of these cranes are made with double rams for the purpose of economizing the use of water, the smaller ram being used in all cases where the loads are not more than 1,500 pounds; and where more than 1,500 pounds is required to be lifted, then the larger ram is placed in commission by the hand of the operator. One such crane used continuously during ten hours will handle, in loading or unloading, 300 tons per day.

Hydraulic Engines and Principle of Construction.—The engine, as before stated, may be of either the horizontal or vertical type. But at the Midland and London and Northwestern railways, horizontal engines are used, and are of two types of construction. In one type the engines are what are known as outside-connection, and the other, inside-connection; that is, the crank-shaft is forged in one type, plain, with cranks on the outer end and fly-wheel in the middle, and in the other type, double-throw right-angle cranks are between the fly-wheels, which are upon the outer end of the shaft. This, however, I consider a mere matter of taste and cost, either one doing equally good work.

Accumulators.—At the Batignolle station in Paris

the accumulators are placed in the open station without any support whatever above their bases, and are exceedingly neat and efficient. The general type of accumulators used, however, is one in which the weight at the head of the ram moves in guides supported in a brick shaft.

The Midland Railway Company have in their London district thirty-three hydraulic engines and fourteen hundred hydraulic coal tips, wagon hoists, capstans, cranes, sack lifts, traverses and turn-tables.

Cost of Power.—The cost in the Midland system is 25 cents per thousand gallons delivered into the mains. In this cost is included 5 per cent. on the cost of the machinery, and 6 per cent. on the cost of repairs, coal, oil, waste, wages, etc.

MACHINERY AT RAILWAY STATIONS.

BROAD STREET STATION, LONDON & NORTHWESTERN R'Y.

7 boilers, locomotive type.
5 pairs hydraulic pumping engines.
1 17-inch accumulator.
2 18-inch accumulators.
1 20-inch accumulator.
54 3-ton hydraulic cranes.
3 hydraulic jiggers, 3,000 lbs.
1 5-ton hydraulic crane.
1 10-ton hydraulic crane.
2 16-ton hydraulic car-lifts.
2 14-ton hydraulic car-lifts.
2 hydraulic hoists, 3,000 lbs. each.

26 hydraulic capstans,
126 capstan dummies.
1 5-ton yard crane.

Camden Station, London.

4 boilers, locomotive type.
2 pairs hydraulic pumping engines.
1 17-inch accumulator.
1 20-inch accumulator.
38 hydraulic cranes, 2,500 lbs. capacity.
2 hydraulic cranes, 4,000 lbs. capacity.
1 hydraulic crane, 6,000 lbs. capacity.
2 hydraulic cranes, 10,000 lbs. capacity.
1 hydraulic crane, 2,000 lbs. capacity.
27 hydraulic capstans.
168 capstan dummies.
93 warehouse cranes, 1,500 lbs. capacity.
3 warehouse cranes, 3,000 lbs. capacity.
1 yard crane, 1,500 lbs. capacity.
1 yard crane, 4,000 lbs. capacity.
1 yard crane, 10,000 lbs. capacity.
1 yard crane, 40,000 lbs. capacity.

Forth Station, Newcastle-on-Tyne.

28 capstans.
50 cranes.
19 turn-tables.
4 traverse-tables
3 locomotive boilers, 1 in reserve.
2 hydraulic pumping engines.
1 17-inch accumulator.
1 18-inch accumulator.

BATIGNOLLE.

2 car hoists.
18 turn-tables
12 cranes.
4 transfer-tables.
2 baggage hoists.
4 accumulators.

The power station is one mile from the point at which the greater part of the power is used.

These figures give you some idea of the work which is done by hydraulics in the way of placing cars in position to be loaded and unloaded, and also to load and unload the same in lieu of the switching engines for handling the cars, and in place of hand power for loading and unloading, as is done by us here.

MACHINERY AT DOCKS.

To give you an idea of the work along the docks, I may name only a few of those of which I was at the trouble to make notes of the actual number of machines in use—although the number here enumerated is but a small per cent. of those which I saw:

The Albert dock at Hull has a 60 horse-power engine, supplies water for working an 80-foot swing-bridge, 19 hydraulic engines for working sluices, gates, capstans; 3 20-ton coal hoists; 1 15-ton crane; 1 3-ton crane, and 34 1½-ton cranes. Pressure used, 775 lbs., which is delivered through 5,350 feet 5-inch, 1,400 feet 4-inch pipe, with 2-inch and 3-inch branches to the various machines.

At Cotton's wharf in London there are 10 hydraulic cranes, 2,500 lbs. capacity, lifting 40 feet; 4 of 4,000 lbs. capacity, and 1 of 9,000 lbs. capacity, and 1 48-ton direct lift; pressure used, 700 lbs. per square inch.

At St. Catharine's docks, engines of 140 horse-power pump against 600 lbs. pressure. They pump through 1,200 yards of 7-inch pipe. The power is used to work a swing-bridge, 75 cranes and 2 direct lifts.

The London docks, 185 horse-power pumping engines, 750 lbs. pressure, pump through 1,450 yards of 5-inch pipe, 640 of 4-inch and 550 yards of 3-inch. These engines work 100 cranes, hoists, and lifts.

At the Victoria docks, 280 horse-power pumping engines are used. These pump against 780 lbs. pressure through 700 yards of 5-inch pipe, 2,000 yards of 4-inch and 200 yards of 3-inch pipe. The power exerted annually is more than 401 million foot-tons, and here, as in the other docks, the power is used to operate a swing-bridge, capstans and upward of 100 cranes and hoists.

The Great Western Railway at Paddington uses water at 700 lbs. to the square inch. They operate 3 car hoists, 3 capstans, 3 hauling engines, 20 turn-tables, 54 cranes of 2,500 lbs. capacity, 16 hoists, 3 traverse-tables, 2 drawbridges.

Cost of Power.—Taking coal at $2 per ton, and allowing 15 per cent. for interest on the cost of the plant and depreciation of the same, wages, oil, waste, etc., the cost per 100 foot-tons of power is about 2½ cents.

DESIRABILITY OF THIS SYSTEM OF TERMINALS FOR CITIES.

The railways and docks of England have had in very general use for the last twenty-five years the system which I have briefly described, and the machinery of the London & Northwestern Broad Street station has been in use for thirty years and is still in perfect condition, doing its regular work every day just as well as when first put in.

The various hydraulic appliances in use at railway stations and docks, though built by different parties, all show great ingenuity in their construction and adaptability to the work required of them, and many of them show in their construction the highest engineering skill.

The system of operating cranes, hoists, engines of all descriptions on a much greater scale than is done by any of the docks or railway companies in any one plant, is found in the London Hydraulic Power Company of London, who are delivering water under 750 lbs. pressure through sixty-four miles of street mains, and supplying power to more than 2,000 machines.

The Liverpool Hydraulic Power Company, and many others, are also furnishing power from a central station, to hundreds of consumers.

This system is also being laid down in Glasgow and Manchester by the city authorities for general distribution of power to whoever may require it.

I mention these facts, not that they have any relation practically to what is required in the railway

terminals of Chicago, but simply to show you that the system has long since passed far beyond the experimental stage. It is fully developed and proven to be the most reliable, economical and convenient power so far known.

There is no difficulty whatever in constructing the pumps to deliver the water under the pressure required, nor is there difficulty in manufacturing the pipes and machinery, nor in maintenance.

In this connection I will state that I saw in Liverpool pipes being removed from the ground, which had been in constant use with 750 lbs. pressure upon them for thirty-five years, and they were, to all appearance, just as good as new. They were being taken up to make room for elevated railway foundations.

In my final report to you I will give drawings of the various machines which I have described, and which are used for performing the various functions of terminal railway service, and also give some data as to work performed. I will in this preliminary report, however, give you some figures as to what is daily performed at the White Cross station of the Midland Railway in London, which is at the intersection of Red Cross and Gewin street, and is a very good example of what can be done upon a small piece of ground. The Midland Railway Company are under very strict regulations as to when they can arrive and depart from this station.

The ground occupied is irregular in shape and altogether only about one acre in extent. The basement is excavated to the level of the Metropolitan Underground Railway, and in this basement all cars are received. They are then lifted up to the street

level, about 25 feet above, and are there loaded and unloaded, and then lowered again, train made up and forwarded to destination. Above the street level there are two stories connected with those below by elevators; these storage rooms are for such freight as is not called for, or which the company is not at the time prepared to deliver. This station has its own power house, with its hydraulic service pipes, capstan, cranes, and 2 car lifts, 4 elevators for the upper stories, 2 accumulators, 2 locomotive boilers, 2 pumping engines. These are also located upon the 1 acre of ground. The water pressure used is 750 lbs. to the square inch. *I saw* 19 *cars transferred from the lower level to the higher one on one of the lifts in twenty minutes, while the other was delivering cars in the reverse direction at the same rate. Between the hours of* 6 *p. m. and* 11 *p. m.,* 160 *cars in and* 160 *cars out are handled, that is,* 160 *cars which come in loaded are taken up* 25 *feet, unloaded, loaded up again, and brought down and put into a departing train and sent away, or, in short, one car per minute is received, sent up to the street level, unloaded, loaded up, sent down again, and sent away. One can be excused if he has doubts of the truthfulness of this statement, but it is true nevertheless.*

I may state, in brief, that hydraulic power is so universally used throughout England — along her docks for loading and unloading the ships, for pulling them into position, for turning bridges, opening dock gates, etc., and for all railway terminals, and over large areas of many of her cities, that hydraulic power may be considered "on tap;" and I find myself asking of myself, why is it that in England— a country speaking the same language as ourselves,

engaged in the same general traffic, so far as railways and shipping are concerned, the habits of the people being generally the same, with the cost of labor about one-half of what it is with us—how is it, I ask myself, that these people use the hydraulic system so generally for doing the work which I have described, and *we* use it not at all? With cheap labor, as in their case, the necessity for motive power of any kind for doing work which can be done by the hand of man is less than with us, where labor is so high. And the only answer I can make which satisfies me in this respect is, that this English system of terminals has generally been investigated by men from America who were not skilled in hydraulic appliances; and as our cars are larger and heavier than those used in England, it has seemed to those men that we could not apply the same machinery to our system which has been so successfully used in England and elsewhere. Another reason why we have not adopted the system may lie largely in the fact that the railways in England, where their terminals exist, were built when the cities through which they ran were already in existence, and the necessity of economy in use of ground, and in rapid and cheap means for handling trains and goods, was forced upon the attention of railway builders at the outset; while with us we built our railways in a greater degree without any cities, or, if any, small ones, and there was no necessity for economizing in space. Now that our cities are built, the same questions are forced upon us in regard to terminals in our cities which were forced upon English engineers at the beginning. To my mind, however, there is no good reason why we

cannot handle our larger cars just as well as the smaller ones. In practice we find no difference in a hydraulic lift, whether we raise a barrow of ashes from the basement of a building to the sidewalk, or whether, as in the Mersey Railway of England, they lift a car 87 feet from the railway to the surface, at a speed of 200 feet per minute, these cars being 19 feet 6 inches by 16 feet 6 inches, and 10 feet high, and are loaded with 15,000 lbs. of passengers ; it is simply a question of size of the hydraulic machinery. The 100-ton guns built by Armstrong are handled by hydraulic power as readily as if they weighed but a pound. The truth is, the weights to be handled by hydraulic pressure need not be taken into consideration ; it is only that the engineer in making his calculations shall know what are the weights to be handled.

In constructing the terminals of England, great wisdom has been shown in utilizing the small terminal space covered by them, but with our knowledge of elevator work, which is not equaled by anything which the English people possess, we may safely go still further than they have gone ; they have but pointed the safe way.

In constructing the terminals here, in addition to all I have seen in England, I would advise that the stations be built several stories in height, and made great terminal warehouses. I would lift by hydraulic power the loaded car directly up to any floor of this warehouse, haul it off from the elevator platform, unload it and send it down again. If these goods are again to be shipped by rail, the empty car should be sent up to the floor where the goods are stored, and there loaded and sent down.

The cost of taking this car up and down again, so far as coal is concerned, is just the friction of the moving parts of the machinery, because all of the power which was required from the pumps to raise the loaded car to the top floor of this warehouse, will be given back by descent of the car when again sent down loaded.

It is also true that the weight of goods descending from the various floors of this warehouse will give back all the power which was required to raise them up there, less the friction of the parts.

The cost of power, however, per ton of freight moved in the yard in transfer of cars from one position to another, and the loading and unloading of the trains, is an amount so small per ton as hardly to be considered in calculating the terminal expenses.

With these double-level stations, you of course have double the area for tracks, and with the aid of hydraulic machinery for handling the cars and freight, you will have again doubled several times the capacity of the terminal for handling cars.

There is not a shadow of doubt in my own mind as to the wisdom of a very liberal expenditure of money to produce in the City of Chicago, and in fact, in all of our principal cities, this form of terminal and method of operation.

This enumeration of railway stations and docks where hydraulic power is used is not to be taken as any indication of the extent to which such power is used, but comprises those places where I took the trouble to get exact data.

One significant fact which I took note of at the stations and docks which I inspected, was that while

there was a general sameness in the hydraulic machinery in use, each had a somewhat different arrangement and used machines different in details from the others. But all of the machines showed careful designing and great engineering skill in adapting the various machines to accomplish the ends sought for.

In comparing the cost of handling freight in and out of the railway stations of England, with the same class of work in and out of our railway stations, I have not yet been able to tabulate the figures obtained so as to be very accurate as to the difference between the cost in England and the United States, but I can safely state that the difference is very great in favor of England, and near the ratio of 3 to 1. In my complete report, which is to follow this soon, full data as to amount of freight handled and number of cars and trains which enter and leave the principal stations will be presented, together with plans of the machines in use and the cost of same.

Respectfully submitted,

GEO. H. REYNOLDS,

Consulting Engineer.

THE CHICAGO RAILROAD TERMINAL PROBLEM, FROM THE ENGINEERING STANDPOINT.

BY E. L. CORTHELL.

Your committee has not only given careful attention and study to the conditions existing in the City of Chicago and in other cities of the United States, but it has also, through one of its members, studied the question of terminals and complicated railway situations in Europe. This member of the committee has examined during the last summer nearly forty railway terminals and complicated railway situations in large cities. Also twenty-two harbors and the relations of the railways to them, and over fifteen hydraulic plants for the handling of freight and express goods at freight stations.

The method adopted in Europe, and used for many years to facilitate both the railroad and marine commerce and make safe the street traffic, presents many features applicable to a city like Chicago.

In England the law prohibits grade crossings of any kind. The railroads are carried over or under each other. The streets, roads and even farm roads are placed over or under the railroads. It would burden this report to give details and extended illustrations of the methods employed, but a few prominent examples may be given. Near Liverpool, on the London and Northwestern Railroad, at Edge Hill, where there is a very extensive yard for making up

freight trains, an ingenious plan has been recently carried out which avoids railroad grade crossings by carrying the tracks over or under each other in making connections, so that this extensive yard can be operated without interfering with the business of any of the main lines of the railroad. Another prominent and well-known example is Clapham Junction, near London. At Manchester, at the London Road station, the freight trains come in on a high level. The cars are lowered to the low level of the streets, where they can be reached by drays. At the great Central station of the Caledonian Railroad at Glasgow, there is an elevated entrance. At Queen Street station of the same city, the entrance is made by an elevated structure, and underneath, crossing at right angles, is a belt railroad largely underground, and in order to make a still better entrance into the city, one railroad is building a tunnel under Argyle street, one of the main streets of the city. At Birmingham a union station is provided in the center of the city and the entrance is by sub-ways from either direction. In London every railroad is brought into the city in such a way as to avoid grade crossing, and the entrance is always by overhead structures, or by tunnels or subways. Several of the lines cross each other, and many of them connect with the Metropolitan District Railway, which is largely an underground road. At the White Cross station, St. Pancras, Broad street, Whitechapel, Bishopsgate and several other stations, there are special hydraulic appliances for handling cars from a high level or the reverse with these hydraulic lifts and capstans, traversers, turn-tables and other appliances for moving the freight cars across or along sev-

eral tracks to the desired position for loading or unloading. The universal opinion of railroad men in England is in favor of the use of hydraulic plants for handling freight cars. Hydraulic lifts are also used in passenger stations, not only in England, but on the Continent, in handling baggage and express and postal matter from one level to another, and also for transferring, by means of sub-ways in the station, from one track to another without crossing the track at grade. To still further prevent the crossing of tracks by the public, the stations, in England at least, and generally in large stations on the Continent, are so arranged that it is unnecessary for any purpose for passengers to cross the track at grade; over-head bridges and sub-ways, well-lighted and convenient, being provided for passengers in taking or leaving trains. All the arrangements for operating the road with safety to human life are so perfect in England that the fast express trains run almost always with a speed of sixty miles an hour through large cities, past great stations, where there are crowds of passengers and trains on other tracks, without accidents. It is the general opinion of railroad men there that all the precautions taken by them are absolutely required for the safe and prompt movement of trains and the proper transaction of their business.

It is now necessary to examine briefly into the conditions existing in Chicago, in order to show the great contrast there is with the conditions above described in European cities. The rapid growth of this city in the last fifty years, raising it from a village to a great metropolitan center, has brought about most unusual commercial conditions. It is still growing with great

rapidity, more, probably, than any other city in the world.

Compared with the other great cities of this country, the ratio of increase in population in the last decade has been nearly three times that of New York, nearly four times that of Philadelphia, Boston and of St. Louis. Nor has the time come, as it does eventually to all great cities, when it has ceased to grow.

The great advance in population is still too great to be arrested for the next two decades. At least it may be safely estimated that the growth of this city, for each decade in the future will not be less than one million. Still further bearing on the railway problem of this city, is the fact that it is the largest city of the Northern division of the United States, the population of which is, by the census of 1890, over 22,000,000 of people, and that the increase in this grand division of the United States is greater than that of any other. As still further indicating the movement of population in this country, is the fact that its center of gravity has nearly reached the longitude of this city.

On its streets are more miles of double-track horse and cable railroads than on the streets of any other city. The magnitude of its marine commerce is given elsewhere in this report.

It is the greatest railroad center in the United States, probably in the world, as far as mileage is concerned. The length of main lines of railroads that terminate at this city is over 54,000. The magnitude of its freight business is also very great. In 1889 there were received and forwarded four and one-quarter millions of freight cars, making the daily handling nearly 12,000 cars. There were moved over 43,-

000,000 tons of freight. There were over 18,000,000 passengers moved over its main lines, and on its suburban lines nearly 11,000,000. The railroads, as they enter this city and reach their terminals, which are well into the center of the population, are laid at the grade of the streets and at the grade of each other, wherever they cross. An attempt, unsystematic and desultory, has been made to raise the streets at points of great danger above the railroads by means of viaducts, of which there are twenty-nine. The following facts are very suggestive of delays and dangers, especially when compared with their entire avoidance by the English railroads as above described. The main lines of the Chicago railroads cross each other at grade at over 100 points. These lines cross sidings or yard tracks at over 30 points. The load tracks running into yards cross main tracks or sidings at more than 120 points. There are, as a partial protection to the public, 487 gates at crossings. It is difficult to ascertain how many traveled streets are crossed by railroads, but there are probably 1,000 or more. According to statistics stated elsewhere in this report, there were last year on these grade crossings over 200 people killed. The growth of the railroad traffic keeping pace, as it must necessarily do, with the growth of the population, has brought about the greatest difficulties in handling this business. The areas of the city freight yards have become altogether too restricted for their purpose. The building of belt railroads has relieved the pressure to a certain extent. One of these belt railroads, St. Charles Air Line, is in the heart of the city and crosses its main avenues and streets at grade. The railroads make transfers with

each other through the Union Stock Yard Tracks. The Western Indiana, built in the outskirts of the city, is situated so as to relieve to some extent the city terminals, and this is shown by the fact that, since 1884, its business has so increased from 223,757 cars per annum to 557,752 in 1890. There have been recently put into operation several lines of another belt railroad, called the Calumet Terminal, which is also now doing a considerable transfer business. There is still another, the Elgin, Joliet and Eastern, about twenty miles from the city, which runs from the Lake on the north to the Lake on the east, and has connection with all the railroads entering the city. Although this road has been opened but a short time, the necessities for transfer between the railroads is bringing to it a large business. The volume of the business at present is cars. Useful as these railroads are in diverting from the busy parts of the city the freight which is destined for consumption here, they are not a large factor in relieving the congested condition of the city terminals, for the reason that the products required by the city itself, for its own consumption and business, are so rapidly increasing that the present restricted terminals cannot handle the business promptly or economically; and it is discouraging to note that, except at extraordinary expense, the areas occupied by the railroads for freight purposes cannot be very greatly extended on account of their proximity to very valuable property.

From the information given above, it will be apparent that the greatest evil (which in some way must be cured or abated) is the danger of the street traffic and the inconvenience as well, both to the pub-

lic and the railroads, of the grade crossings. Every new street that is opened, the annual increase of travel on all the streets crossing the railroads, the increase of trains and in the length of trains, and the increase in the switching and otherwise handling of cars, constantly increase the delays and dangers. When the whole situation is known, and the one fact is stated, that this city is growing in population at the rate of 1,000,000 per decade, the extraordinary obstacles in the way of both railroads and street traffic would be appreciated.

The question now arises, what shall be done to solve the difficult problem? Your Committee have carefully studied the entire situation, and can see but one plan that is practicable, and that is, to at once adopt the principle and rule of raising the railroad tracks to a suitable height above the streets, and to cease the unsystematic and ill-advised method of raising the streets here and there, by means of viaducts, at great cost, occasioning great damage to property and thus converting an otherwise level city into one of abrupt undulations—hills and valleys, as it were. Your Committee would suggest that, in order to avoid the construction of an elevated railway for each of the railroads, they should be combined into three groups of elevated railroads, one entering the city from the southwest, one from the west and one from the north.

It is evident, from the fact that the largest number of railroads enter the city from the east, south, and northwest, that the elevated entrance from these directions should be of large dimensions. An elevated railroad with from six to ten tracks on its main stem

entering the city as far as practicable, would be required for the immense business that enters from these directions over the present surface tracks of the Lake Shore & Michigan Southern, the Rock Island & Pacific, the Western Indiana and its tenants, the Ft. Wayne, and the Chicago & Alton, the Chicago, Madison & Northern, and the Atchison, Topeka & Santa Fé. This would embrace nearly all the roads coming from the east, from the south, and from the southwest, except the Illinois Central and its tenants, which enter the city along the lake front. In order to adapt this elevated entrance, those methods which have been found practicable and economical in Europe, the clear height of this road above the streets should be sufficiently great to give a free and unrestricted movement of street traffic under it. It should be floored over, beneath the tracks, by a solid steel and concrete construction, so that the extensive area beneath could be used for yards for the various railroads, or for warehouse and other similar purposes. Connected with this, at points where the present surface areas covered with tracks would not in any way interfere with the street traffic, could be arranged extensive freight yards. The cars entering the city on this elevated structure, whose destination is for city delivery, could be lowered to corresponding tracks beneath the structure by the means of hydraulic plants. To avoid the use of locomotives on the low level tracks at the surface of the ground, hydraulic turntables, capstans and traversers, could be used just as they are in many parts of Europe. One immense hydraulic installation, with its pipes running the entire length of this elevated structure, six or eight

miles, with auxiliary accumulators at suitable points, would not only economically and promptly handle the entire business of the railroad, but would also furnish power for handling goods in warehouses, manufactories and various industries that might be established along the line of this elevated entrance. As to the two smaller groups of elevated roads from the west and north, combining all the roads coming from these directions, the method should be adhered to of an elevated entrance wherever the present conditions of track, streets, viaducts, and the river permit. This would give three great elevated passenger terminals, which should be so located that they might be conveniently united by a connecting elevated railway, so that passengers coming into the city in one direction and desiring to pass through the railroads leaving on opposite sides of the city, could make the transfer without the inconvenience of omnibuses, street cars, street vehicles, or on foot as now.

If, in connection with the important work now contemplated and under charge of the Board of Trustees of the Sanitary District, there should result the replacing of a large number of swing bridges by fixed bridges, the connection between the elevated railroad entrance above suggested could be much more conveniently arranged.

Your Committee, however, cannot assume the responsibilities belonging to the Sanitary District Trustees to devise a plan to meet the requirements of the law, under which the Board of Trustees is acting. That Board must decide how it will obtain sufficient water from the lake to dilute the sewage according to the requirements of the law, and at the same time

furnish adequate accommodation for navigation, also intended by the law. Your Committee is not aware that any plan for this important work has been adopted by the Board of Trustees. It might possibly be found practicable to obtain the necessary velocity, volume and depth of water in the present channels of the Chicago river by removing all the swing bridges, with their center piers, and by sufficiently widening the river everywhere and establishing new dock lines. The swing bridges could be replaced by bridges with two leaves opening up, like those of the Tower bridge in London, now under construction, and with a foot passageway high enough to clear the masts of vessels with topmasts struck. This foot passageway should be provided with large hydraulic elevators; the hydraulic plant for operating the railroad terminals could be enlarged so as to furnish power for handling the bridges and their elevators, also as in many European harbors, for handling the vessels into the dock and to perform other work along the river requiring power, also in warehouses, coal yards, ore docks, etc. This suggested plant for utilizing the Chicago river for the admission of lake water for sanitary purposes would, no doubt, require the lowering of tunnels and the river bed to a depth of twenty-two feet or more. The value of the property required for widening the river to a uniform width of say, 250 feet, might be excessive and possibly prohibitory, but the suggestion is entitled to a careful consideration. Considering all the facts referring to the methods in Europe and to the conditions existing in Chicago, and the suggestions which have been made, your Committee would advise that, whatever plan is

adopted, the principle of entirely separating the street and railroad traffic should be adopted at once, and carried out as rapidly as it is practicable. There should, in the future, in no instance be permitted, inside the city limits, any grade crossings. All these changes in the traffic conditions could not, of course, be done in one year or in two years, but they should be made as rapidly as the railroads and the city could jointly furnish the means for the work, and the expensive and unwise plan of building viaducts over the railroads should be at once abandoned.

THE CHICAGO RAILROAD TERMINAL PROBLEM, FROM THE LEGAL STANDPOINT.

NATURE AND EXTENT OF THE DUTY TO THE PUBLIC OF RAILROAD CORPORATIONS WHOSE LINES CROSS THE SURFACE OF STREETS IN THE CITY OF CHICAGO, AND THE REMEDY FOR ITS ENFORCEMENT.*

The large extent to which the streets of the city are occupied by its vast network of railroads; the obstruction to the public use occasioned thereby; the hindrance to the movement of traffic upon the railways and the injury to and destruction of persons and property at these intersections; the necessary augmentation of these evils in the future by the continued growth of the city, and the consequent increase of business and travel upon the streets, and especially that which will be produced by the coming exposition, demand a radical change in the policy hitherto pursued by the public authorities.

It is a matter of the first importance in the consideration of the subject, to determine where the responsibility rests with respect to the expense of such changes and alterations as will preserve the streets to the public use, free from any substantial or material obstruction by the railways.

It would seem, upon principles of natural justice,

* The Board of Directors of one of the largest systems of railways terminating at Chicago, wishing to take independent advice as to the power and duty of the company in its occupancy of certain of the streets of the city, with its tracks, submitted the question to one of the most eminent corporation lawyers in the northwest for opinion, which is here given in full.

inasmuch as the railway occupancy of the streets is exclusively for the private gain and advantage of the railroad corporations, without any corresponding benefit to the public, that the burden should be borne by the agency which creates the necessity for the change.

More than eighty years ago this principle was declared by the Court of King's Bench, in The King v. The Inhabitants of Lindsey, 14 East's Rep., p. 317.

There authority was given to make the river Bain navigable, and in the execution of that purpose a cut was made in the river at a point where a highway intersected it and crossed by means of a ford; the cut made the highway impassable at its intersection of the stream, but the court held that, although the act of parliament conferring the right to improve the navigation of the river and to make the cut in question, did not require the restoration of any highway injured or destroyed thereby, yet that duty was implied from the very nature of the case.

To the same effect is Rex v. Kerrison, 3 Maul & Selwin, 526.

In re Trenton Water Power Company, 20 N. J. Law, 659, the same question was presented.

The Water Power Company was authorized to construct a canal or cut a sluice or raceway; it did so across a highway so as to render a bridge necessary where none was required before.

No duty was expressly imposed by its charter or by law to build this bridge.

The court said: "In accordance with these views, it has been repeatedly held in England that where a private corporation, in the prosecution of its own ob-

jects, has rendered a bridge necessary in a public highway, where none was necessary before, it was their duty, and not the duty of the county, to erect and maintain such bridge. It was in the pursuit of their own advantage that they rendered the bridge necessary, and therefore they ought not to burden the public with its maintenance; *qui sentit commodum sentiri debet et onus.* Thus a canal company authorized by an act of parliament to make the river Bain navigable, and to make and enlarge certain navigable cuts and build bridges and other works connected with their navigation, having for their own benefit made a navigable cut and deepened the ford which crossed the highway, and thereby rendered a bridge necessary for the passage of the public, and which was accordingly built at the expense of the company in the first instance, the Court of King's Bench held the company bound to maintain the bridge; and that the burden of repairs was not to be thrown upon the inhabitants of the county. Rex v. The Inhabitants of Lindsey." *Supra.*

"In Rex v. Kerrison the case was that certain persons and their successors were authorized by act of parliament to make a river navigable and to cut the soil of any persons for making a new channel; and by virtue of which they cut through a highway and rendered it impassable, and a bridge was built over the cut, over which the public passed, and which had been repaired by the proprietors of the navigation. The court held that the proprietors, and not the county, were bound to repair.

"No express obligation was imposed by the act of parliament on the proprietors of the cut in the case

last cited, and it was argued on their part that, as there was no mention of bridges nor any words of condition in the act, no obligation arose to build bridges; though it was admitted that the necessity of the bridge originated with the making of the cut.

"The defendant also relied strongly on the circumstance that it was not proved that the proprietors of the cut (whom he represented) originally built the bridge, but only that they had occasionally repaired it.

"Lord Ellenborough met this argument thus: 'The act enables them to cut new channels as occasion should require; and if occasion requires them to cut through a public highway, their duty is to furnish a substitute to the public by means of a bridge.'

"Can we put any other construction upon the act but this: that the legislature intended that so far as regarded the making of the river navigable, and the cutting new channels for that purpose, neither public nor private rights should stand in their way; but still they should make good to the public in another shape, the means of passage over such ways as they were empowered to cut through?

"Mr. Justice Bayley added: 'There would have been no difficulty in framing an indictment against the proprietors for not building a bridge.'

"The indictment might have charged them with cutting across the highway, and if they had pleaded the act of parliament, the court would have determined upon it that they had power only to make the cut *sub modo;* that is, providing a substitute to the public.

"I fully concur in the reasoning of the court in that case, and am, therefore, of opinion that the Trenton Water Power Company is under an obligation to

build and keep in repair, bridges over their canal or race-way wherever it crosses any public highway or street."

This case was decided in 1846.

In Louisville & Nashville R. R. Co. v. The State, 3 Head (Tenn.), 523, it was held that:

"It was the duty of the Company to have built, not only under the general principles of the common law, but by the terms of its charter, in which it was made its duty so to construct its road across a public road or highway as not to impede the passage of persons or property along the same."

This case was decided in 1859.

To the same effect is Veazie v. Penobscot R. R. Co., 49 Me. 121, decided in 1860.

To the same effect is Phœnixville v. the Phœnix Iron Company, 45 Pa. St. Rep. 135, decided in 1863, citing numerous cases where like principles are announced, and approving the English cases above cited.

In 1873 the principles announced in the foregoing cases were fully approved by the Supreme Court of Illinois, in the case of The People v. the Chicago & Alton R. R. Co., 67th Ill., 118, thus:

"It is a well-settled principle of the common law, resting upon the most obvious considerations of justice, that any person or corporation that cuts through a highway for the benefit of such person or corporation, must furnish to the public a proper crossing, *even though acting under a license from the proper authorities.* With reference, of course, to cases where the legislative power has not in terms relieved the person or company that interferes with a highway from the

necessity of removing any obstructions they may create.

"In the absence of such an express provision, it is palpable that a railway company is under the obligation to leave every highway that it crosses in a safe condition for the use of the public.

"As illustrating the common law rule, we refer to Queen v. Inhabitants of Eli, 69 E. C. L. 843."

In 1874 the English cases above referred to were approved by the Court of Queen's Bench in Oliver v. The Northeastern Railway Co., The Law Reports, Q. B., Vol. 9, p. 409.

The same principle was announced in 1876 by the Supreme Court of Maryland in the Northern Central Ry. Co. v. Mayor, etc., 46 Md. 445.

Also in 1878, in Eyler v. County Commissioner, 49 Md. 269.

Also in 1882, by the Supreme Court of Kentucky in R. R. Co. v. Commonwealth, 80 Ky. Rep. p. 147.

Also by the Supreme Court of Michigan in 1883, in Maltby v. Chicago & West Michigan R. R. Co., 17 N. W. Rep. 717, citing numerous cases.

In The City of Minneapolis v. St. Paul, Minneapolis & Manitoba Ry. Co., 28 N. W. Rep. p. 3, decided in 1886, the whole subject was thoroughly considered and the adjudged cases examined, and the same principle laid down as in the cases above referred to.

Same case, 35 Minn. 131.

Also in the subsequent case of the City of Minneapolis v. the Minneapolis & St. Louis Ry. Co., decided in 1888, 39 N. W. Rep. p. 153.

Also The City of Minneapolis v. the St. Paul,

Minneapolis & Manitoba Ry. Co., 36 N. W. Rep. p. 870.

Also in Chesapeake, Ohio & Southwestern R. R. Co. v. Dyer County, 11 S. W. Rep. p. 943, in which the whole subject is thoroughly considered and the adjudged cases examined and approved.

These well settled principles have, in many of the States of the Union, been enacted or declared by statute.

In Illinois, substantially, the following provisions have been in force for a long period.

"Hereafter at all of the railroad crossings of highways and streets in this State, the several railroad corporations in this State shall construct and maintain said crossings and the approaches thereto within their respective rights of way so that at all times they shall be safe as to persons and property."

II.

The nature of the duty thus imposed upon railroad corporations is a continuing one, whether the duty rests upon the principles of the common law above announced, or upon expressed statutory provision.

In Commonwealth v. New Bedford Bridge, 2 Gray, 352, it was held that the duty of making and maintaining draws in the bridge was a continuing duty, and required such changes in the character and size of the draw, as the changing condition and circumstances of trade and increase in the size of vessels might from time to time require.

In Manly v. Canal & Ry. Co., 2 Hurlstone & Norman, 840, it was held by the court that:

"Whether or not the bridge was sufficient at the time it was built, the company were bound to maintain a bridge sufficient with reference to the present state of circumstances."

In English v. R. R. Co., 32 New Jersey L. 245, it was held that the general duty over restoration imposed by statute or the common law, requiring the widening of a bridge to carry a highway over a railroad track rested upon the railroad company whenever public convenience and necessity required it.

In Burritt v. City of New Haven, 42d Conn. 198, the court held, referring to English v. Railroad Company, *supra:*

"That a bridge over a railroad crossing of this company in the city of New Haven was constructed of suitable capacity to accommodate the public when the railroad was first built; but by the increase of travel incident to the growth of the city, the public convenience afterwards required a material enlargement of the bridge, and was held that the obligation of the company was a continuing one, and commensurate with the increasing necessity of the public. The original duty was fully discharged, but a new and additional one was created by a change of circumstances, and its performance was required, not because it would be beneficial to the company to perform it, but because the convenience, necessity and safety of the public demanded it."

In Cook v. Boston & Lowell R. R. Co., 10 Am. & Eng. R. R. Co., p. 330, the Supreme Court of Massachusetts, construing statutory provisions declaratory of the common law duty of restoration, say:

"Nor can we accept that construction of the

statute which would limit the duty and obligation of the railroad company to providing for the wants of travelers at that time.

"The Legislature intended to provide against any obstruction of the safe and convenient use of the highway for all time; and if by the incresaing population in the neighborhood, or of an increasing use of the highway, the crossing, which at the outset was adequate, is no longer so, it is the duty of the railroad corporation to make such alteration as will meet the present needs of the public who have occasion to use the highway."

See also numerous cases cited in notes to the same.

In Mayor v. Railroad Company, 2 Atlantic Reporter, 262, the Supreme Court of New Jersey hold that the duty imposed to restore is a continuing duty, and say:

"Suppose a public street in a town to have been originally laid out over the surface of the railroad track, and that by reason of the growth of the business of the railroad at locality, trains should pass in such quick succession as to render the street almost impassable, there can be no doubt that under such circumstances, the railroad company could not discharge themselves from the obligation which this section imposes, except by passing the street thus obstructed under the railroad so as to restore it to public use." And see cases cited therein.

See also the following cases:

Rex v. Inhabitants of Kent, 18 East. 220.
Leopard v. Ches. & O. Canal Co., 1 Gill, (Md.) 222.

Inhabitants of Cambridge, 7 Met. 70.
Parker v. Boston & Me. Ry., 3 Cush. 115.
Nicholson v. Ry. Co., 22 Conn. 74.
Commonwealth v. Deerfield, 6 Allen, 449.
Titcomb v. Fitchburg Ry. Co., 12 Allen, 254.
R. R. Co. v. State, 32 N. J. L. 220.
White v. Inhabitants of Quincy, 97 Mass. 430.
Cott v. Lewiston, etc., Ry. Co., 36 N. Y. 214.
Richardson v. N. Y. Cent. & H. R. R. R., 45 N. Y. 847.
Johnson v. P. & S. Ry. Co., 10 R. I. 365.
Railroad v. Moffitt, 75 Ill. 524.
Farley v. C. R. I. & P. Ry., 42 Iowa, 234.
Hays v. N. Y. Cent. & H. R. R. R., 9 Hun (N. Y.) 63.
N. Cent. R. R. v. Mayor of Baltimore, 46 Md. 425.
R. R. Co. v. Commissioners, 31 O. St. 338.
People v. N. Y. C. & H. R. R. R., 74 N. Y. 302.
Masterton v. N. Y. C. & H. R. R. R., 84 N. Y. 247.
Paducah, etc., Ry. Co. v. Commrs., 80 Ky. 147.
Cooke v. Ry. Co., 10 A. & E. Ry. Ca. 328.
Jersey City v. Jersey Cent. Ry. (N. J.), 2 At. Rep. 262.
N. Y. & G. L. Ry. v. State, 32 A. & E. R. R. Ca. 186.
Long Island Ry. Co. v. Brooklyn, 8 N. Y. Sup. 805.

To the same effect are the Minnesota cases above cited, in the first of which the court says:

"The duty prescribed is to keep at all times, and under all circumstances, the streets at points where they are intercepted by the railroad, in a condition and state of repair, so as not to impair or interfere with their free and proper use.

"And if this cannot be done with a surface crossing, the company must do it, either by carrying their tracks over or under the highway, or the highway under or over their tracks; and the duty of thus restoring or preserving the free use of the street includes the doing of whatever is needed to accomplish the required end, and which is rendered necessary to be done by reason of the presence of the railroad in the street.

"It is clear upon both reason and authority that this duty is a continuing one.

"It is not fulfilled by simply putting the street, at the time the railroad is built, in such condition as not to impair or interfere with its free and proper use at *that* time, or even by maintaining it in such condition as would have accomplished that end had the circumstances and conditions originally existing continued.

"The requirement of the statute has a wider scope than this, and has reference to all future exigencies.

"The legislature never intended to fix or limit the duty of the company by the necessities of the public at any one time or under any particular state of circumstances.'

"They intended to impose upon the company the duty, from time to time, of putting the street in

such condition and state of repair as changed circumstances, such as the increased travel on the street, or increased traffic on the railroad, might render necessary to its free and proper use.

"A condition of the street or mode of crossing the railroad might be entirely adequate for the accommodation of the public under one condition of things, and entirely inadequate under another; and consequently a provision which at one juncture would be a discharge of this statutory duty would at another amount to its violation.

"For example, a single track laid on the surface of a street in a small town where the traffic on the railroad and the travel on the street were limited, might not, and probably would not, seriously interfere with the use of the street; while numerous tracks in constant use, thus laid upon a crowded thoroughfare of a populous city, might almost entirely deprive the public of the use of the street.

"In the latter case it would be a mere technical quibble for the railroad company to say that it had performed its duty because it had put the surface of the street in proper condition, although by reason of constantly passing trains the public were as completely prevented from crossing it as if the street had been divided by an impassable gulf."

See also Memphis, etc., Ry. v. State, 11 S. W. Rep. 947.

Mills on Eminent Domain, p. 386, sec. 198.

Wellcome v. Leeds, 51 Me. 313.

City of Chester v. B. & P. R. R. Co., 21 At. Rep. 320.

State v. C., B. & Q. R. R. Co., 45 N. W. Rep. 469.
State v. City of Camden, 21 At. Rep. 565.
State v. M. & St. L. Ry. Co., *supra*.

In the latter case the court say: "The fact that respondent formerly laid its tracks at a considerable expense upon the grade of the streets, by the authority of the City Council, does not exempt it from bridging when the increased use of both the streets and the railways renders that necessary."

III.

AS TO THE REMEDY.

In re Trenton Water Power Company, *supra*, the obligation rested wholly upon the principle of the common law, in the absence of any express statute upon the subject. The court said:

"The only remaining question is whether the obligation of the company is so clear that the court ought to grant a mandamus. For it is undoubtedly improper to grant this writ except in cases of clear obligation.

"The writ itself, in its very form, prejudges the party on the matter of his obligation.

"True, he may return to the first writ any matter of avoidance; as that he does not sustain the office or the relation which the writ supposes, as was done in the case of State v. Holliday, when brought before the court in 3d Halsted's Reports, 265.

"But if the defendant admits or cannot deny his

office or the capacity or relation in which the writ supposes him to stand and the facts recited in the writ, he cannot question or deny his duty and obligation in point of law. But where the court has no doubts on the question of obligation, and the act or omission complained of is admitted, I can see no good to be attained by putting the parties to the expense and delay of proceeding by indictment before granting that relief which it is clearly seen must in the end be awarded.

"And as the obligation of the defendants in this case appears to my mind to be clear and free from all doubts, I am decidedly of opinion that we ought to grant the motion of the applicants.

"Mandamus awarded."

People v. D. & C. R. R. Co., 58 N. Y. 152, is a most thoroughly considered case on the subject of mandamus in such cases, the opinion being read by Mr. Justice Folger.

In that case the statute imposed the duty of restoration generally, without conferring upon any public authority the duty or power of prescribing any particular mode of restoration. The court held that the writ should point out in what particulars the corporation had failed to restore, and to specify the particular manner of restoration.

This case is to be commended for its very thorough and philosophical consideration of the office and purpose of the modern writ of mandamus.

In the Minnesota cases, the City Council of Minneapolis were, by the municipal charter, vested with the general control of the streets and alleys.

The Council adopted a specific plan of restoration,

which in the first case involved carrying one of the streets under the railroad tracks, while in the other cases a plan was adopted which involved the lowering of the numerous tracks of the railroad companies crossing four streets, some ten feet below the existing surface of the streets, and the construction of bridges above the tracks, with a headway of twenty feet in the clear.

In the first case the court said :

"Whether respondent has in fact complied with the requirements of its charter, is a question which neither it nor the city can determine absolutely without the assent of the other.

"Like all other matters involving a controversy concerning public duty and private right, it has to be adjusted and settled by judicial inquiry and determination.

"Hence the decision of the City Council is not conclusive upon the questions of the duty of the company to build this viaduct or that it should be built upon the plan proposed. These are matters, if put in issue, for the determination of the court upon the hearing."

Citing Commonwealth v. New Bedford Bridge, Cook v. Boston & Lowell R. R. Co., *supra*, it must be conceded that the surface of the streets in this city, except perhaps in some of the remote suburbs, are so obstructed by railway tracks that the duty arises on the part of the railroad companies responsible therefor, to restore them, in the language of the provisions of the statutes cited above. Undoubtedly mandamus would lie to at once require the performance of the duty imposed both by the principles of the common law and the provisions of the statute.

And the writ might run in general terms requiring the restoration, but leaving the mode to the discretion of the railroad companies, unless that discretion is taken away by the provisions of the statute which will be presently cited.

The provisions of the charter of the City of Chicago placing the control of the streets and alleys and public grounds in the hands of the City Council undoubtedly confers upon that body power to prescribe any reasonable plan or mode of restoration.

And any ordinance prescribing a plan of restoration either by the construction of viaducts or requiring railway tracks to be constructed above the streets would be enforceable in the courts by the writ of mandamus, unless such ordinances could be avoided upon the ground of unreasonableness.

And this proceeding could be brought by the city through the interest which it has by virtue of the provisions of its charter.

But the statutes of this State confer express power to prescribe the plan or mode of restoration:

"Whenever any railroad corporation shall neglect to construct and maintain any of its crossings and approaches, as provided in Section 8 of this Act, it shall be the duty of the proper public authorities having the charge of such highway or streets, to notify, in writing, the nearest agent of said railroad corporation of the condition of said crossing or approaches, and direct the same to be constructed, altered, or repaired in such manner as they shall deem necessary for the safety of persons and property." Paragraphs 71, 72, 73 and 74, Starr & Curtis, Annotated Statutes.

IV.

Inasmuch as the duty of restoring streets intersected by railroads to their former state of usefulness to the public, and free from any substantial obstruction, rests wholly upon the railroad companies, and the expense thereof is entirely to be borne by them, both by the terms of the statute and the principles of the common law, no good reason is perceivable why the municipality of Chicago should continue the policy hitherto pursued, of sharing in the expense so occasioned.

Indeed it may well be claimed that the use of the public moneys in the manner indicated subjects the public officers responsible therefor to a prosecution, civil or criminal or both, for misapplication of the public funds.

It is a well-settled principle that the public funds cannot be used for a purpose not expressly authorized by law; hence the use of these funds for the purpose indicated amounts to nothing less than a donation, which the public officers have no authority to make.

And it might well be contended that the railroad corporations which have received these funds or their benefit, through their application to the restoration of a street, the expense of which was imposed on them, are liable to account therefor as a trust fund wrongfully secured upon both legal and equitable principles.

Finally, it is submitted that in no large city in the civilized world has there been in the past, or is there now in effect, a policy on the part of the municipal authorities which sanctions such comprehensive and intense obstructions and interference with the public

highways as that adopted by the public authorities in this city.

And it is high time that both the public authorities and the railroad corporations awoke to the fact that a proper regard for their own interests severally, as well as considerations of humanity, requires that the highways and the railroads should be divorced upon a plan which shall secure to the public, when traveling upon the highways, immunity from injury to, and destruction of, human life, and the public and the railroad companies enabled to transact their business free from interference or obstruction by each other.

THE CHICAGO RAILROAD TERMINAL PROBLEM AS PASSED UPON BY THE SUPREME COURT OF THE STATE OF ILLINOIS.

LIGARE V. CITY OF CHICAGO.*

(*Supreme Court of Illinois.* Oct. 31, 1891.)

MUNICIPAL CORPORATIONS—ORDINANCES—EMINENT DOMAIN—OPENING STREETS—OBSTRUCTION OF WATER-WAYS.

1. Where a City Council on the same day passes two ordinances, the one providing for widening a certain street, and the other granting a railroad company a right of way on the street as widened, and requiring it to pay the expense of condemning the land necessary for widening the street, as provided for in the other ordinance, the two ordinances will be treated as if they were a single ordinance.

2. A City Council has no power to condemn land for streets for the express purpose of giving a railroad company the use of the street in such a manner as to exclude all other travel therefrom.

3. A street cannot, by condemnation proceedings, be so laid out across a navigable water-way as to destroy the water-way.

4. Rev. St. Ill. 1874, c. 24, art. 5, §1, cl. 31, which authorizes cities "to construct and keep in repair canals and slips for the accommodation of commerce," does not give them power to fill up slips.

Appeal from Superior Court, Cook County; John P. Altgeld, Judge.

This is a petition by the City of Chicago to condemn land under two city ordinances. The condemnation was ordered as prayed for. George A. Ligare, one of the owners of land sought to be taken, appeals. Reversed.

The first ordinance provides as follows: "Section 1. That, in consideration of the agreements

* Reported by Louis Boisot, Jr., Esq., of the Chicago bar.

hereinafter contained, the right is hereby granted to the Chicago, Madison & Northern Railroad Company, its lessees, successors, and assigns, to construct, maintain, and operate a railroad with two or more main tracks and necessary side or connecting tracks, turnouts, switches, and appurtenances, over such lands as it now has, or may hereafter in any manner acquire, the right to lay tracks upon, and over, across or along, all intervening streets, alleys, and public grounds along and upon the following route. * * * Sec. 5. Whereas an ordinance has been introduced and is now pending in the City Council for the widening of Archer avenue, between Bushnell street and Sanger street, by appropriating therefor the land on the south side of said avenue lying north of the following described line, to wit: * * * Now, in case said ordinance shall go into effect and said avenue is widened, permission and authority are hereby granted to the Chicago, Madison & Northern Railroad Company, its lessees, successors, and assigns, to lay down, maintain, and operate four railroad tracks, and to the Chicago & Alton Railroad Company, its lessees, successors and assigns, to lay down, maintain, and operate two railroad tracks, on that portion of Archer avenue, when widened as aforesaid, lying between the two following lines, to wit: One line north of, and nearly parallel to, and seventy (70) feet distant from the south line of widened Archer avenue, as said line is above described; the other line north of, and nearly parallel to, the said described line, and one hundred and sixty (160) feet distant therefrom. The permission and authority granted in this section are upon the condition, however, that no steam rail-

road track shall be laid down or maintained on said Archer avenue, between Bushnell street and Sanger street, except between the two lines last above described; and upon the further condition that the cost and expense of procuring the land necessary for the widening of Archer avenue as aforesaid, and all damages occasioned thereby, and the cost of grading and paving the same, and also so much of the said street adjoining it on the north as shall be occupied by the tracks of the Chicago, Madison & Northern Railroad Company and the tracks of the Chicago & Alton Railroad Company, shall be paid for by the Chicago, Madison & Northern Railroad Company, and a special assessment for the aforesaid cost and expense may be levied solely on the property of said railroad company. And the said Chicago, Madison & Northern Railroad Company shall build, at its own expense, in conformity to plans to be approved by the commissioner of public works, along the south side of its roadway, the entire length of Archer avenue, which it shall traverse, a substantial brick or stone wall 12 feet in height, with stone coping, which said company shall keep in good condition and repair, and shall also construct a sidewalk along the south side of said wall whenever the same shall be ordered by the municipal authorities of said city. Sec. 6. The rights and privileges hereby granted to the several railroad companies herein named in Archer avenue are subject to the rights and privileges therein of the Chicago City Railroad Company, and permission and authority are hereby granted, upon the completion of the widening of Archer avenue, as aforesaid, to the said Chicago City Railroad Company, if

it elects so to do, to remove their tracks from their present location in that portion of Archer avenue so to be widened, and to relay them upon the south 70 feet of Archer avenue, as widened: provided, however, that said removal shall not be made until a permit therefor shall be obtained, and the proposed location of said tracks on said 70 feet has been approved by the commissioner of public works, and said tracks shall be relaid subject to the approval of the said commissioner. Such removal shall be a waiver and abandonment of the rights of said Chicago City Railway Company as to the portion of Archer avenue from which said tracks are removed. Sec. 7. All that portion of Ogden slip lying south of the north line of Archer avenue, as the same shall be widened as recited in section 5, shall be permanently filled with earth, and the cost of the said improvement shall be paid by the Chicago, Madison & Northern Railroad Company." * * *

The second of said ordinances is as follows: "Section 1. That the portion of Archer avenue, lying between a point on the south line of said avenue, 100 feet east of the east line of Bushnell street, and the easterly line of Sanger street, be, and the same is hereby, ordered widened, as follows, viz.: By taking or appropriating therefor the land on the south side of said avenue lying north of the following described line. * * * Sec. 2. Any legal proceedings necessary to accomplish the widening of Archer avenue as aforesaid are hereby authorized, and the counsel to the corporation is hereby directed to file a petition in a court of competent jurisdiction in Cook County, Ill., in the name of the City of Chicago, praying that

the just compensation to be made for private property to be taken or damaged for said improvements or purpose specified in this ordinance shall be ascertained by a jury; and to file a supplemental petition in accordance with the provisions of section 53, of article 9, of an act of the General Assembly of the State of Illinois, entitled, 'An act to provide for the incorporation of cities and villages.' Sec. 3. The improvement hereby ordered shall be made and the cost thereof paid for by a special assessment to be levied upon the property benefited thereby, to the amount that the same may be legally assessed therefor, and the remainder of such cost to be paid by general taxation, in accordance with article 9 aforesaid."

C. C. Bonney and R. S. Thompson, for appellant. E. H. Gary, for appellee.

SCHLOFIELD, C. J. It is, to our minds, clear that both ordinances before us in this case are but parts of a single and entire scheme. They were adopted on the same day, and the former expressly refers to, and is by its terms dependent upon, the adoption and enforcement of the latter; and it requires that the entire cost and expense of enforcing both ordinances, and all damages which may be adjudged against the city by reason of their being adopted and enforced, shall be paid by the railroad company. Moreover, the attempt to widen Archer avenue for the limited distance, and in the peculiar manner described in the second ordinance, is manifestly to meet a local want in that respect; and the first ordinance conclusively shows that that local want is space for laying down additional railroad tracks, and nothing else. It is also of some significance, as confirmatory of this view, that

the petition for condemnation alleges that the second ordinance contemplates the closing and filling up of Ogden slip, and that can only be upon the assumption that the first ordinance is supplemental to the second; for Ogden slip is not mentioned or referred to, directly or indirectly, in the second ordinance. The case must, then, be treated precisely the same as if both ordinances had been embodied in one; and we shall therefore treat them as a single ordinance, for widening a street in the manner proposed, at the same time giving the use of all of the old street, at the place where the street is widened, and a part of the new street added by the widening, exclusively to steam railroad companies for laying and operating their tracks, and also for closing and filling up a public waterway. Archer avenue is sixty feet wide. One steam railroad track is now laid on it, and operated by the Chicago & Alton Railroad Company. The ordinance adds, at the point under consideration 100 feet to the street, and takes 30 feet of that and adds it to the 60 feet, making 90 feet; and upon this authorizes the Chicago and Alton Railroad Company to lay and operate two additional tracks, and the Chicago, Madison & Northern Railroad Company to lay and operate four tracks, making in all seven tracks to be laid and operated by steam engines within this 90 feet, or one track for every 12 6-7 feet, and then requires that the part thus to be used shall be cut off from the remaining 70 feet of the street to be added, by a stone or brick wall 12 feet in height. The space to be occupied by the railroad tracks has also a line for street-cars operated within it, but permission is given to remove that to the 70 feet south of the wall.

We shall take no time to demonstrate that the 60 feet of old street and the 30 feet of new street, thus to be occupied by seven steam railroad tracks, are exclusively devoted by the ordinance to the use of railroad companies. Hemmed in by the wall on the one side, and by the buildings or inclosures on private property on the other, no rational being would, at the risk of the inevitable dangers from passing engines and cars, use that part of the street as a common highway, unless under stress of most extraordinary circumstances. It is not material that the public are not, by the words of the ordinance, forbidden the use of this part of the street. The effect of the grant is inevitably an exclusion of all but these railroads from its use, and the law deals with results, and not with mere forms, in such matters. Undoubtedly it has been held, in many cases in this court, that it is a legitimate use of a street to allow a steam railroad track to be laid and operated upon it when there is legislative authority therefor, but it has never been held that, under legislative authority merely authorizing tracks to be laid in streets, it is competent for a municipality to grant the exclusive use of a street to a railroad company.

The leading case on this question is Moses v. Railroad Co., 21 Ill. 516. It was there sought to enjoin the laying of a railroad track in a street, and it was held that it was admissible for a Common Council, invested with legislative authority to that end, to authorize a railroad track to be laid in the street, because streets are for no exclusive mode of passage of persons and property, and therefore all modes may be tolerated. The gist of the reasoning is in the follow-

ing sentence from the opinion of the court: "A street is made for the passage of persons and property, and the law cannot define what exclusive means of transportation and passage shall be used." In Stack v. City of East St. Louis, 85 Ill. 377, action was brought against the city for permitting a railroad company to obstruct a street by a necessary embankment made for its track in approaching a bridge, and the action was maintained upon the ground, in part, that a railroad company cannot be allowed to exclude other uses of the street. And it was, among other things, said in the opinion: "It has, however, been held that a city or village may authorize the laying of railroad tracks in their streets; that such a use is not inconsistent with the trust for which they are held by the city. But, in thus permitting them to be used, the city has no right to so obstruct the streets as to deprive the public and adjacent property-holders of their use as streets. The primary object is for ordinary passage and travel, and the public and individuals cannot be rightfully deprived of such use." To like effect, also, is Canal Co. v. Garrity, 115 Ill. 155, 3 N. E. Rep. 448; City of Olney v. Wharf, 115 Ill. 523, 5 N. E. Rep. 366. And so it has been held, in Missouri, it is not competent for a city to authorize such use of a street, dedicated as a street, as will destroy it as a thoroughfare for the public. Dubach v. Railroad Co., 89 Mo. 486, 1 S. W. Rep. 86. See, also, Railway Co. v. City of Louisville, 8 Bush. 419.

It is so familiar that we need not stop to demonstrate it, that cities, villages, and towns are only empowered to lay out, open and improve streets for such public use, and that persons and property within

the municipality may be legitimately assessed or taxed for payment therefor, and that persons and property within a municipality cannot be legitimately assessed or taxed for the right of way, or making or improving of a road for a railroad company alone. This being conceded, authority will in vain be sought for a municipality to devote a street which has been improved and maintained by municipal expense to an exclusive use for which it has no authority to lay out, open, or improve it. We do not deny that the city has power to widen streets generally, and that when it has undertaken to do so the motives that may have actuated those in authority are not the subject of judicial investigation, but the purpose for which a thing is done is very different from the motives which may have actuated those by whom it is done, and is, in the present instance, a legitimate subject of judicial investigation; for the right to exercise the power of eminent domain is in all cases limited by the purpose for which it shall be exercised. Thus, private property may be condemned for public use, but it may be shown that the use in fact is not public, but private. Railroad Co. v. Wiltse, 116 Ill. 454, 6 N. E. Rep. 49; Sholl v. Coal Co., 118 Ill. 427, 10 N. E. Rep. 199.

Statutes conferring power to exercise the right of eminent domain are to be construed strictly. Unless both the letter and spirit of the statute relied upon clearly confer the claimed power, it cannot be exercised. City of East St. Louis v. St. John, 47 Ill. 463; Railroad Co. v. Wiltse, and Sholl v. Coal Co., *supra*. It is not a question whether the person or corporation seeking to exercise it might not do so with as great

safety to persons and property as any other person or corporation, or whether it would work out an equitable result to allow a particular person or corporation to exercise it in a given case. The question is purely one of legal power. That person or corporation which the statute says may exercise it for a stated purpose may exercise it for that purpose, but for no other purpose, and no other person or corporation not thus authorized can exercise it for that purpose. And so we held in Railway Co. v. Galt, 133 Ill. 657, 23 N. E. Rep. 425, and 24 N. E. Rep. 674, that a railroad company, under authority to condemn property for its right of way, cannot condemn property for a street of a city; and obviously, if this be true, the reverse must also be true. A city cannot, under authority to condemn property for streets, condemn property for a railroad track, for the principle must be the same. But may the city here do indirectly—by mere change in the form—that which it cannot do directly? Although the city may not condemn property for the use of the railroad company, yet, inasmuch as it may allow railroad tracks to be laid in its streets, may it not first condemn property for itself, and then afterwards allow the railroad tracks to be laid upon it to the extent of excluding all other uses? But we have seen that, under the power merely to authorize railroad tracks to be laid in streets, a city has no right to authorize railroad tracks to be laid upon streets so as to exclude the other public uses of the street, so long as it shall remain a public street; and here it is shown that the condemnation is for the express purpose of enabling the city to give a part of the old street and thirty feet of additional space to the exclusive use and

occupation of railroad companies. The substance is not to be lost sight of through any mere jugglery in the use of words. This proceeding is, in fact, not for the city, but for the railroad companies. Condemning for the railroad companies, and condemning for the city to then give to the railroad companies are, in legal effect, and so far as concerns this case, precisely the same thing.

We also fail to find any authority in the law to condemn and fill up Ogden slip. The evidence is much less satisfactory as to what this slip is than it should have been. There is enough, however, to show that it is a navigable water-way, connected with the south branch of Chicago river, and appurtenant to appellant's lots. A map in evidence shows its location, and it was spoken of by witnesses, without objection, as appurtenant to these lots and as a water-way. Thus, George M. Bogue said he had examined appellant's lots fronting on Ogden slip; considered it as having a dock frontage. Edward Campbell said that he was familiar with Ogden slip. "Travel has never been obstructed by vessels, heavily laden, getting stuck there in the slip, mostly in the summer time—vessels laden with coal. The slip was used but little last summer; mostly by canal boats for the stone-yard. Larger vessels have not used the slip lately." Edward C. Huling said that appellant's property has a water front, and could receive from slips. "The closing up the slip"—*i. e.*, Ogden slip—"would shut off all water front." There are other references in the testimony of the witnesses of like character, but these, we think, are sufficient. The right of navigation and the right of crossing the water-way are equal. Both

are to be exercised, and the rights of each are to be guarded. Illinois Packet Co. v. Peoria Bridge Ass'n, 38 Ill. 467. When a franchise is granted to construct ways in streets across a water-way, there is no implied right to destroy the water-way, but it must be so bridged that its use will not be unnecessarily impaired. Elliott's Roads and Streets, p. 32 *et seq.* If it be conceded that the State may authorize the taking or destruction of a water-way, it devolves on those who claim that the State has done so to show it; and, since that is not done by simply showing power to lay out, open, and improve streets across water-ways, no such power is here shown. Power is given the city by the thirty-first clause of section 1, art. 5, c. 24, Rev. St. 1874, p. 218, "To construct and keep in repair canals and slips for the accommodation of commerce." But we have found no power granted to the city to close them and fill them up. We think, counting as we do, the two ordinances as one, the condemnation adjudged is for a purpose unauthorized by law; and the court erred in admitting the ordinances in evidence, and in rendering judgment as it did. The judgment is reversed.

Supreme Court of Illinois.

ILLINOIS CENTRAL RAILROAD COMPANY AGAINST THE CITY OF CHICAGO.

Nos. 81, 82, and 83.

Decision rendered May 12, 1892.

Northwestern Reporter, Vol. 30, No. 12, page 1044, June 3, 1892.

OPINION BY MAGRUDER, C. J.

These are three bills in chancery filed by the appellant company against the appellee in the Circuit Court of Cook County; and as the cases involve the same questions and have been submitted upon the same abstracts and briefs, they have been taken and considered as one cause. The object of the bills is to enjoin the City of Chicago from extending certain streets across the right of way of the Illinois Central Railroad Company. The first bill alleges that, on Sept. 22, 1890, the city passed an ordinance for opening Fifty-sixth street across such right of way, and thereafter filed its petition in the said Circuit Court for the condemnation of the land necessary for such improvement; that on Sept. 15, 1890, the city passed an ordinance for the opening of Seventy-ninth street across said right of way, and thereafter filed its petition to condemn in the same court; that on Jan. 19, 1891, the city passed an ordinance for opening Sixtieth street across said right of way, but no proceeding for

condemnation in pursuance of this ordinance appears to have been begun at the time of the filing of the bill on Feb. 28, 1891.

The second bill, filed on June 15, 1891, alleges that, on March 16, 1891, the city passed an ordinance for opening Seventy-second street across said right of way, and thereafter filed its petition for condemnation in said court.

The third bill, filed on July 24, 1891, alleges that, on March 30, 1891, the city passed an ordinance for opening Eighty-second street, between Dobson avenue and Stony Island avenue, by condemning therefor that part of appellant's right of way lying between the north and south lines of said street, both produced eastwardly across said railroad, and thereafter filed its petition for condemnation in the Superior Court of said county; that on June 2, 1891, the city passed an ordinance for opening and widening Ninetieth street, from Manistee avenue to the west line of appellant's right of way, by condemning therefor certain specified parts of appellant's right of way; that the land over which it is so proposed to extend Eighty-second and Ninetieth streets is "railroad yard" land; that eight tracks have been laid in that part of the "yard" where Ninetieth street will cross, and two tracks are in course of construction in that part where Eighty-second street will cross; that the city thereafter filed its petition in said Superior Court to condemn the land necessary for so opening and widening Ninetieth street.

The bills pray for injunctions against the opening or extension of these streets across the railroad tracks or right of way, at grade, or otherwise than by viaducts

over or subways under such right of way or tracks. The bills charge, and the answers of the city thereto deny, that the extension of streets as ordered in said ordinances will be an irreparable injury to the railroad company, and will obstruct the use of its tracks as now located, and materially and unnecessarily impair its franchises. Both sides introduced testimony, and after hearing was had, the court below dissolved the injunctions and dismissed the bills. From such decree of dismissal the present appeals are prosecuted.

The material questions here involved have been settled by recent decisions made by this court in the cases of *Illinois Central R. R. Co.* v. *City of Chicago*, 28 N. E. Rep. 740, and *Chicago & N. W. Ry. Co.* v. *City of Chicago*, 29 N. E. Rep. 1109. In view, however, of the great ability and ingenuity with which counsel have again pressed these questions upon our attention, we will re-state our views.

The appellant company, like every other railroad company, holds its right of way subject to the right of the public to extend the public highways and streets across such right of way.

The constitution of the State provides that "the exercise of the power and the right of eminent domain shall never be so construed or abridged as to prevent the taking by the General Assembly of the property and franchises of incorporated companies already organized, and subjecting them to the public necessity, the same as of individuals." (Cons. of 1870, art. 11, sec. 14.)

By the Act of 1872, to provide for the incorporation of cities and villages, the General Assembly conferred upon the City Council in cities the power "to

lay out, establish, open, alter, widen, extend, grade, pave or otherwise improve streets, alleys, avenues, sidewalks, wharves, parks and public grounds and vacate the same." (Rev. Stat., chap. 24, art. 5, sec. 1., paragraph 7.) If the Legislature had granted to cities no other power in regard to the extension of streets across existing railroads than the general power conferred by paragraph 7, here quoted, it might be necessary to consider and discuss a number of authorities, to which counsel for appellant have referred in their briefs. These authorities hold that the land included in the right of way of an existing railroad is already devoted to a public use by express legislative grant. That the extension of a street across it is such an appropriation of it to another public use as is not authorized by a general power to open or extend streets; that, in such case, the authority must be created or the legislative intent must be made to appear by express words, or by necessary implication. The General Assembly has conferred upon the cities in this State the power to extend streets over railroad rights of way by express legislative authority. That authority is given by paragraph 89 of section 1 of article 5 of said Act of April 10th, 1872, in the following words: "The City Council shall have power by condemnation or otherwise to extend any street, alley or highway over or across or to construct any sewer under or through any railroad track, right of way or land of any railroad company (within the corporate limits); but where no compensation is made to such railroad company the city shall restore such railroad track right of way or land to its former state, or in a sufficient manner not to have impaired its usefulness."

Counsel say that the judgments to be rendered in the condemnation proceedings will take the land itself, or the exclusive use thereof. Such cannot be the effect of the judgment. We held in Illinois Central Railroad Company v. City of Chicago, *supra*, that the track to be condemned under the provisions of paragraph 89 "for the extension of the street over and across railroads, railroad rights of way and lands," was intended by the Legislature to be "subject to the joint use by the railroad in the exercise of its franchise and by the public as a street." The use by the public is, as matter of fact, subject and subordinate to the use by the railroad company. The trains of the railroad company have a prior right to passage over the crossing. The public, at whatever inconvenience it may be to the interests or the business of the individual citizen, is compelled to wait until the cars of the company have passed. The ordinances, in providing for an extension of the streets across the right of way and for the condemnation of railroad property for the purposes of a street, provide only for the acquirement of an easement by the public over the railroad land, and not for any ownership in the fee thereof. The petitions in the condemnation proceedings ask only that land may be condemned for the improvements specified in the ordinances, and the improvements so specified are never easements to be acquired for the purpose of crossing or passing over the tracks or rights of way. No judgments have yet been entered in the condemnation proceedings sought to be enjoined, but such judgments, when entered, in whatever language they may be couched, can only clothe the city with an easement or right to pass over the

tracks. They cannot vest the city with the fee or the land, or with the exclusive use thereof, because the statute enters into and forms a part of the judgment, and limits and qualifies the nature of the condemnation therein ordered. As paragraph 89 authorizes nothing more than an easement to be acquired by the condemnation proceedings, it follows that the judgment therein "would necessarily only have vested the city with the right of use and occupancy of the land condemned, subject to the rightful use of the railroad company thereof. Neither will have the right of occupancy to the exclusion of the other, but each subordinate to the right of the other for the separate use contemplated; the one occupying and in control thereof for all the legitimate purposes of a public street, and the other for the reasonable and proper exercise of its franchise." While, however, the statute itself will limit the condemnation judgment in the manner here indicated, as to the extent of the right conferred by it, yet the court rendering such judgment has the power to specifically state therein the nature of the interest thereby vested in the city. (*Ill. Cent. R. R. Co.* v. *City of Chicago*, *supra*.)

We have also held, in the latter case, that equity will not interpose to enjoin a condemnation proceeding, at any rate for such reasons as are set up in the present bills. Whatever just claims the railroad company may have to compensation can be set up in that proceeding. "We are not aware of any authority that authorizes or gives jurisdiction to courts of equity to proceed by injunction unless there is an excess or abuse of the power conferred by law, or there

is an attempt to take and appropriate the property without authority of law, or in a manner and to an extent not authorized by law." (Ill. Cent. R. R. Co. v. City of Chicago, *supra*.) There is no such abuse or unlawful attempt shown by the records in these cases.

The allegations contained in these bills amount, in substance, to complaints that the passage of trains over the proposed crossings will be so frequent and the amount of public travel upon the streets will be so great as to subject the appellant company to great inconvenience and hindrance in the operation of its road. Allegations of a similar character were made in the bill in *L. S. and M. S. Ry. Co.* v. *C. and W. I. R. R. Co.*, 97 Ill. 506, where the complaining companies filed a bill against the defendant company to enjoin the latter from prosecuting a condemnation proceeding instituted for the purpose of acquiring an easement or crossing over the tracks of the former; in the bill in that case, it was stated that complainant's business was constantly increasing; that more than 3,500 cars and about 400 engines passed daily over the premises in question; that complainants intended to construct other tracks; that they could not properly transact their business, or do their duty to the public without the use of the whole of said premises; that any interference therewith would cause great and irreparable injury to them and to the interests of the public committed to their charge as carriers; that, if defendant's road should be constructed and operated as proposed, the business would be almost doubled; that such increase would so hinder and embarrass complainants in transferring freight

and running trains as to cause an injury constantly increasing and not susceptible of compensation by damages in a case at law, and would impair and infringe and destroy the franchises of complainants, and that the construction and operation of defendant's road as proposed would necessarily be a nuisance of a serious and irreparable nature in the delay of business and increased danger to life; the bill was answered, and after hearing had, was dismissed for want of equity. We affirmed the decree of the court below, and held that a court of chancery could not relieve against the injuries complained of. The charges made in the present bills are no stronger than those made in the *C. & W. I. R. R. Co. case.*

It is claimed that paragraph 89 gives to the City Council the option of extending the street either above the railroad tracks by means of a viaduct, or across it at grade, and that a court of chancery will require the Council to adopt the former rather than the latter method of crossing, because less inconvenience will thereby be caused to the appellant in the operation of its road. It is admitted by counsel for appellant that the Legislature intended by the use of the word "across" to provide for a crossing at grade, but it is insisted that the word "over" was intended to designate a crossing above the right of way, track or land, by means of a viaduct. The two words "over" and "across" may be used interchangeably and as having the same meaning. Webster thus defines the word "across": "from side to side; athwart; crosswise; quite over." He defines the word "over" as follows: "above, or higher than, in place or position, with the idea of covering; across; from side to

side of; upon the surface of." The word "over" has been held to denote a crossing upon the surface in *Newburyport Turnpike Corporation* v. *Eastern Railroad Company*, 23 Pick. 326, where the Supreme Court of Massachusetts said: "words 'over' and 'under,' as applied to the surface, are not precisely opposites. One passes over a road, if he crosses it on the surface, as well as when he crosses above it on a bridge." (*B. & M. R. R.* v. *Mayor, etc., of Lawrence*, 2 Allen, 107.) But the word "over" has also been construed to denote a crossing at a higher level and not on the same level; and it has been held to mean "not *upon* but *above*, so the railroad should pass under the highway." (*R. R. Co.* v. *Royalton*, 58 Vt. 284; *B. & M. R. R. Co.* v. *Mayor, etc., of Lawrence, supra.*) While, therefore, the word "over," as used in paragraph 89, may be construed as contemplating a crossing of the street at the same level or grade with the railroad track, we are inclined to think that its meaning is broad enough to also confer the power of extending the street above and over the track or right of way, by means of a viaduct or bridge.

But the word "across" was evidently intended to designate a crossing at grade or on the same level as the railroad right of way. Consequently, the City Council is vested by paragraph 89 with the power to extend the streets either *over* or *across* the tracks, either above the tracks by means of viaducts, or on the same grade or level with the tracks. The Council is thus clothed by the Legislature, not only with the power of acquiring an easement by condemnation or otherwise over the railroad tracks or right of way, but also with the discretionary power of deciding as

to the mode of crossing, whether above by viaduct, or at grade and upon the same level. In the present cases the ordinances do not provide for crossings by means of viaducts, but for crossings at grade. The municipal authorities have exercised the option or discretionary power conferred upon them by the Legislature, and have provided for crossings in one only of the methods indicated in the statute, and have instituted condemnation proceedings in pursuance of the ordinances so passed by them. Their action in this regard is political or legislative in its character, and cannot be controlled by the courts.

Appellant in these cases is asking a court of chancery to substitute its judgment for the judgment of the City Council upon a question which belongs exclusively to the legislative branch of the government. They are asking a court of chancery to require the City Council to repeal its ordinances for grade crossings and, in the place thereof, to adopt ordinances for viaduct crossings. Such relief as this cannot be granted under the facts disclosed in these records. While it may be true that inconveniences and interruptions, both to appellant and to the public, may result from street crossings made necessary by the unparalleled growth of the population in the City of Chicago, yet the proof does not disclose that the ordinances in these cases are unreasonable in their terms or in the methods provided therein for the extension of the streets.

In *Curry* v. *Mount Sterling*, 15 Ill. 320, we said: "This power of the corporation to extend and open streets applies to all lands within its boundaries, whether the same be laid out into town lots or not.

The extension of the street in question was a matter of discretion on the part of the board of trustees (of the town). The courts cannot review the exercise of that discretion."

In *C. R. I. & P. R. R. Co.* v. *Town of Lake*, 71 Ill. 333, we said: "The taking and appropriating property for a public street or highway by a municipality is a public use in its nature, and cannot be questioned or denied. * * * When the use is public the judiciary cannot inquire into the necessity or propriety of exercising the right of eminent domain. That right is political in its nature and not judicial. It belongs exclusively to the legislative branch of the government, and under our constitution the judiciary have nothing to do with it."

The *Curry case* and the *Town of Lake case* were reindorsed and approved in *Dunham* v. *Hyde Park*, 75 Ill. 371.

In *Brush* v. *City of Carbondale*, 78 Ill. 74, it was said: "If the city is incorporated, then the Council probably have power to open, grade and repair the streets, and may, for aught we know, have ample discretionary power to do so, as to time, manner and cost, and if acting under the general incorporation law; * * * the power is general, and confers a large discretion in its exercise, and that power will not be controlled by the courts unless there is abuse operating oppressively upon individuals. * * * Where persons or officers are acting within well recognized powers, or exercising a discretionary power, a court of equity will be wholly unwarranted in interfering, unless the power of discretion was being manifestly abused to the oppression of the citizen."

In *Sheridan* v. *Colvin*, 78 Ill. 237, we said: "The second question is, what is the nature of the power sought to be exercised in passing the ordinance under consideration? To that question there can be but one answer, and we shall not stop to discuss it. The power is legislative and discretionary. The third and last question is, had the court of chancery jurisdiction to interfere with the exercise of that power? We are clearly of the opinion that it had not. The subject is purely political."

In *L. S. & M. S. Ry. Co.* v. *C. & W. I. R. R. Co. supra*, we said: "The question whether it is wise to permit such railway company to select its own route and choose the point and manner of crossing other railroads, was also a political question for the General Assembly to determine, and that determination cannot be reviewed by the courts."

To the same effect are the text-books and the decisions in other States. Dillon in his work on Municipal Corporations (4th ed. vol. 1, sec. 95) says:

"Where, by its charter, a Municipal Corporation is empowered, if it deems the public welfare or convenience requires it, to open streets or make public improvements thereon, its determination, whether wise or unwise, cannot be judicially revised or corrected." In Lewis on Eminent Domain it is said (sec. 239): "Whether the power of Eminent Domain shall be put in motion for any particular purpose and whether the exigencies of the occasion and the public welfare require or justify its exercise, are questions which rest entirely with the Legislature. When the use is public the necessity or expediency of appropri-

ating any particular property is not a subject of judicial cognizance."

(*Boom Co.* v. *Patterson*, 98 U. S. 403; *C. & E. I. R. R. Co.* v. *Wiltse*, 116 Ill. 449; *People* v. *N. Y. C. & H. Riv. R. R. Co.*, 74 N. Y. 302; *M. & St. P. Ry. Co.* v. *City of Faribault*, 23 Minn. 167; *Nat. Docks R. R. Co.* v. *Central R. R. Co.*, 32 N. J. Eq. 755; *Nat. Docks & N. J. J. C. Ry. Co.* v. *State*, 21 Atl. Rep. 570; *Struthers* v. *Dunkirk, etc., Ry. Co.*, 87 Penn St. 282; *Central Ry. Co. of N. J.* v. *State*, 32 N. J. Eq. 220; 2 Wood's R'lw'y Law, page 981; Elliott on Roads and Streets, page 598; *I. C. R. R. Co.* v. *Bently*, 64 Ill. 438; *People* v. *C. & A. R. R. Co.*, 67 Ill. 118; *L. M. & C. & X. R. R. Co.'s* v. *City of Dayton*, 23 Ohio St. 510; *Johnston* v. *Prov. and Springfield R. R.*, 10 R. I. 365; *People ex rel.* v. *B. & A. R. R. Co.*, 70 N. Y. 569.)

We concur in the following views expressed by the Supreme Court of the State of Ohio in *L. M. & C. & X. R. R. Co.'s* v. *City of Dayton, supra:*

"The mere fact that the extension of the street as proposed, will inconvenience the plaintiffs or subject them to additional expense in transacting their business and operating their road, constitutes no ground for the interference of a court of equity. The same results to a greater or less extent are produced wherever a railroad is crossed by a public street or highway. These are matters which it is clearly the duty of the City Council to take into consideration in determining the necessity and expediency of the proposed improvement, but so long as their proceedings are regular and they act from proper motives and within the limits of their authority, the discretion confided to them in respect to the location and es-

tablishment of streets is not subject to judicial revision."

We have recently held, in *Drexel* v. *Town of Lake*, 127 Ill. 54, that it was a question to be determined by the trustees of a town which one of two modes of carrying off the sewage of a district should be adopted as the best and most expedient mode, and we there said: "The choice of expedients is within the legislative discretion of the trustees of the town, a discretion with which the courts will not interfere unless clearly abused."

Paragraph 89 was adopted by the Legislature in 1872. Afterward, in 1874, the Legislature passed an act requiring the railroad companies in this State to construct and maintain railroad crossings of highways and streets. (*Chicago & N. W. Ry. Co.* v. *City of Chicago*, *supra*.) Considering paragraph 89 without reference to the subsequent Act of 1874, we cannot see that the application of the second clause of the paragraph to the facts of this case furnishes any justification for a resort to a court of equity. Such second clause provides that, "where no compensation is made to said railroad company, the city shall restore such railroad track, right of way or land to its former state, or in a sufficient manner not to have impaired its usefulness." Without deciding the question whether any obligation does or does not rest upon the city under the present proceedings, to restore the crossing in a sufficient manner not to impair the usefulness of the tracks, such obligation, if it existed, would not be violated because the city chooses to extend the streets at grade, rather than by means of a viaduct. The language of the second clause is not to be taken liter-

ally. It is well understood that the track or right of way cannot, in the nature of things, be restored to the same state of usefulness with the street thereon, as before. It is to be restored so as not to impair its usefulness more than is necessary, in view of its use for the purposes of a street, subject to the use by the railroad company; it is not to be rendered less useful, except in so far as diminished safety and convenience are inseparable from its use by the public as a street crossing. It is not expected that the crossing can be so restored as to obviate all danger or delay or inconvenience. It is only necessary that there should be no unreasonable impairment of the usefulness of the railroad right of way. To this effect is the weight of authority. 2 Wood's Railway Law, sec. 271, page 975, note 2, and cases; *Com.* v. *Erie, etc., R. R. Co.*, 27 Penn St. 339; *People ex rel.* v. *D. & C. R. R. Co.*, 58 N. Y. 152; *Johnston* v. *Providence & Springfield R. R. Co.*, 10 R. I. 365; *C., R. I. & P. R. R. Co.* v. *Moffitt*, 75 Ill. 524; *City of Bridgeport* v. *N. Y. & N. H. R. R. Co.*, 36 Conn. 255.

2 Wood's Railway Law, sec. 271, page 981 note 1; People v. Boston & Albany R. R. Co., 70 N. Y. 569; State v. St. P., Minneapolis & Manitoba Ry. Co., 35 Minn. 181.

So far as the extension of the streets across Eighty-second and Ninetieth streets is concerned the language of paragraph 89 is broad enough to authorize the extension across the railroad "yard," as well as across the tracks or right of way. The proof shows not only that Eighty-second street is one mile from Ninetieth street, but that what is called a "yard" is nothing more than a collection of tracks; and hence the open-

ing of the streets across the land embraced in the yard is authorized by paragraph 89 under the rule laid down in Pres't, etc., D. & H. C. Co. v. Vil. Whitehall, 90 N. Y. 21.

The decree of the Circuit Court dissolving the injunction and dismissing the bills is affirmed.

Affirmed.

The Chicago Railroad Terminal Problem, from the Standpoint of the People and the Public Press.

[*From the Chicago Herald, July* 26, 1892.]

GIVE US THIS DAY A HUMAN LIFE.

If the people of Chicago were informed that every day an assassin would steal into a home, and plunge a knife into the heart of a citizen of this city they would take instant measures to stop the horror. If the assassin were so furtive as to not easily be caught they would employ all the detective agencies in the state to catch him. If he were a vampire skulking in the wood until night afforded his desired opportunity, they would employ hounds to run him from cover. If he were a snake that lurked in secret den or slimily escaped to rock or marsh after his daily deed of blood, they would blast the rock and uproot earth to destroy him. If a daily life were known to be ordered taken in Chicago by anything in human form, by anything in animal form, by anything having life itself to be taken, an end of that life would end the daily sacrifice. Yet a life a day is taken in Chicago, and will be taken this year, next year, and the year thereafter, indefinitely, unless the people of Chicago put an end to the business.

Whose life is to be the next sacrifice? The grade-crossing slaughterers carry on a lottery with the inhabitants of Chicago. The *Herald* printed Sunday the list of last year's victims; a life a day for nearly every day in the year. No one of the dead was warned in advance that the next turn of slaughter was to be his or hers. Had such warning been given, the intended victim might at least have made his will had he property to preserve for helpless heirs. His children would have pleaded, could they have known the lot had fallen to their father, that he should not go that day to his bread-earning work. The mother would have endeavored to keep her son off the streets could she have forecast his doom. The grade-crossing assassins do not run their death lottery on fraudulent principles. The management of the Louisiana lottery were often charged with manipulating the wheel so that they could keep big prizes within their own circle, using dummy names on winning tickets. Not so the Chicago grade-crossing death lottery managers. They are square. They do not select their victims on any but true lottery principles.

The victims are chosen without discrimination against locality, sex, occupation, creed, race, politics, poverty, wealth, youth, old age. It is enough that the slaughterers get a victim a day. It satisfies them that a human being is daily taken from the population of Chicago by leave of the people of Chicago, who make them a gift of grade crossings. It is all the same to these life-takers whether the victim be obscure or eminent. They are indifferent whether they slay married or single. It is naught to them that they make orphans of half a dozen children to-

day or slay only a child. Give us this day our daily victim, is their complete prayer.

Nor need they cease to pray this prayer so long as the people of Chicago comply with it. A life a day is a voluntary tribute by the people of Chicago to the grade-crossing slaughterers. The streets are the people's. The crossings are the people's. Not a vestige of right has any corporation on the streets or on the crossings, except the right that has been given to them by the people. They exist by consent of the people. They run their slaughter machines on the thoroughfares by the will of the people. They are licensed slaughterers. They have as much legal right to slay a citizen a day as any concern in the stockyards a steer a day. They perform their daily slaughtering with as much regularity and as much zeal as the stockyard butchers their daily task. The difference is, that at the stockyards slaughtering is done of inferior animals that superior ones may be fed, while at the grade crossings slaughtering is done only that rich corporations may grow richer out of the sacrifice of human beings.

How much longer will the people of Chicago consent to extend the slaughtering privileges of the grade-crossing corporations? Give us this day our daily victim contents these slayers of human beings now. They may grow impatient with that limit They may prefer to increase their speed within the city. They may resolve to dispense with a few more of their old and incompetent gate-watchers and flagmen, and cease to make any pretense of warning citizens that their slaughtering machines are approaching the crossing. They may prefer whole street-car

loads of victims, as on several occasions they have come frightfully near doing within the past year. There is nothing to prevent their doubling or trebling their daily quota. Public indifference, official corruption, will tolerate two lives a day lost at grade crossings, or three a day or ten a day as they tolerate one a day now.

If a company were formed under the laws of Illinois to traverse the streets with a guillotine every day, and by lot sacrifice a citizen to its knife and basket, there might be a riot. The guillotiners would be guillotined. But we suffer the grade-crossers to guillotine a life a day, and we do nothing about it. If application were made and granted for license for a guillotine company, opinion would be warranted that the licensing authorities of Chicago were all madmen. Yet the grade-crossing slaughterers enjoy like privilege, and the community flatters itself that it is quite sane.

[*From the Chicago Herald, July* 27, 1892.]

TWO VICTIMS MORE.

It is quite true that life is lost on railroads that do not use grade crossings. Life is lost every day in one way or another. Loss of life on land by rail is greater than loss of life by water or casualties resulting from navigation. Life is lost on elevated roads. Life is lost on depressed tracks. Life will continue to be lost on railroads in Chicago even after every railroad in the city shall have elevated its city terminals. All this, which is beyond dispute, is another reason why

one daily cause of slaughter by railroads shall cease. If life shall occasionally be taken after elevated tracks are provided, there is so much the stronger argument for stopping the life-taking that can be stopped by elevated terminals. *Monday two lives were taken at grade crossings in Chicago.*

One was at the grade crossing of One Hundred and Thirteenth street. The man's body is at the morgue. Who is he? What family has lost its bread-winner? What wife is widowed? How many children are orphans? How much more sorrow is cast into the lines of a number of human beings who were dependent on this human being?

At Twenty-ninth street grade crossing a man was killed. His dead body was taken to his home within the city. It makes no difference who he is, whether rich or poor, married or single, the cruel and shocking manner of his death should create as much horror, were he the lowliest of human beings, as if he lived on one of the finest avenues and had been snatched by the grade-crossing slaughter machine from a luxurious equipage. Perhaps he owned no equipage. Probably he was unable to hire one. The part of the city given as the region in which his home was contains no fine palaces. No blooded stock occupies its barns. He was as valuable in life to his family, nevertheless, as the millionaire to his. In one sense he was more valuable. The millionaire's family may suffer human grief over the sudden taking off of a father dear to his household. But his children would not be deprived in consequence of his death of opportunity of schooling. They would secure a fair start in life. They would not be crowded down and out. Compulsory

ignorance would not be their necessary portion. It is the crowning cruelty of public slaughter of the poor that the deed carries with it an entail of cruelty passing from one member to another of the unfortunate family. Public slaughter is the right word. Every grade-crossing death is a public death wrought by authority of the people of Chicago. *They have ample power in law to compel the railroad corporations to lift their tracks and locomotives off the streets that belong of right to pedestrians and vehicles necessary for the transaction of business and the carriage of the people safely and securely.* Every death at a surface crossing by a railroad is an assassination by the City of Chicago.

There are railroad deaths for which neither city nor the railroads are to blame. Monday a young man lost his life by attempting to alight from a running train. The railroad is not at fault for his death. Neither are the people of Chicago. A man was run over on the tracks of another railroad and mangled to death. It seems to have been his own fault. The road is not responsible for his death. Still another man was killed on tracks but not at a grade crossing. *Five lives altogether were lost Monday on railroad tracks.* The *Herald* is not charging on the railroads or on the people responsibility for any but those due to grade crossings and the impossibility of guarding the crossings so as to prevent slaughter at them. *Last year the average of such deaths was about one a day. This year it is probable that the average will be higher.*

There is no remedy for this daily slaughter but elevation of tracks within the city. The people have the power to compel the railroads to elevate their tracks

within the limits. It is will they lack. The corporations will not take a step toward it until the people compel them. Meanwhile the daily sacrifice of human life will go on; and no home can foretell whose turn will be next to be desolated.

[*From the Chicago Evening Post, July* 29, 1892.]

WHO WAS THE MURDERER?

It is a clearly established fact that Mrs. D. Pickette, whose horrible death on the track of the Chicago, Milwaukee & St. Paul Railroad, near Indiana street, was told in the *Evening Post* of yesterday, is a victim of murder. The only question is, Who is the murderer?

Upon this question pertinent evidence is furnished by the switchtender, Goshorn, who was interviewed by a reporter of the *Evening Post* soon after the fatality occurred and before he had time to be warned into silence by the attorneys of the St. Paul road. In these circumstances Switchtender Goshorn said:

"A train had to be taken to a sidetrack. I threw the switch to take that train over, and went with it about a block. I left the switch here open, not thinking that train No. 4 would move out till I got back."

"Why did you go with the train?"

"I had to. *I have to attend to seven switches.*"

"How far apart are the most widely separated of these switches?"

"About a block or more."

"Is it customary to leave main-track switches open

while the switchtender goes a block or two away, leaving his switch unattended?"

"*It is done here every day.*"

"Was it not your duty to have closed that switch immediately?"

Mr. Goshorn did not answer this question.

Seven switches, separated by the distance of a block, on a road over which an unremitting stream of passengers thunders day and night! Was it possible for one man to do the work? If he tried and failed was it his fault that human life was lost? Or was it the fault of a parsimonious management that cares more for the paltry wages of an underpaid employé or two than for human life and limb?

We commend the question to the coroner's jury, with perfect confidence that—the guilty persons will be whitewashed as a thousand others have been.

The crossing slaughter goes bravely on!

[*From the Sunday Herald, July* 31, 1892.]

WRITTEN WITH BLOOD.

RAILROAD SLAUGHTER IN CHICAGO, LIVES SACRIFICED BY THE MAINTENANCE OF GRADE CROSSINGS—INDIFFERENCE OF THE CORPORATIONS TO THE PUBLIC SAFETY —HOW LONG WILL IT LAST?

There were only nineteen persons killed in Chicago during the past ten days by the cars of the several railroads centering here. None of them were men of note in this community; most of them

were laborers, earning a scant subsistence by daily toil, and few of them will be missed except in the circumscribed area in which they erst lived, moved and had their being. A few of them had families dependent upon them for support, and these families will no doubt suffer for want of even the little which they received of their earnings. They will mourn their loss; perhaps they will anathematize the iron Juggernaut beneath whose wheels their mainstay of support was crushed to a shapeless, sanguinary mass, but their sufferings and agony will go unheeded, for the stockholders in the railway corporations are constantly clamoring for larger dividends; the apathetic aldermen are waiting for more boodle, and the grade crossings remain, guarded by decrepit laymen or protected by gates over which sleepy watchmen preside when danger is remote but are always missing when a wild engine comes snorting and panting along the rails, crushing and mangling and killing whoever may chance to step upon the track. There may be a momentary commotion—the gathering of a curious crowd of passers-by; the rumbling of a patrol wagon or ambulance; the verdict of a coroner's jury of no one to blame; a few lines in the daily newspapers, and the incident is forgotten. Death is a monster of most frightful mien, but he is seen so often on the streets of Chicago in the vicinity of the railroad grade crossings that he is but little regarded, and even frail women and young children become familiar with his aspect and pass along without a shudder. Constant familiarity with death in its most frightful form has bred contempt, and it does not appall.

ASKING MUCH ; GRANTING LITTLE.

Seven men were slain by one railroad within the past ten days—the Illinois Central, a corporation that has received much from the City of Chicago, and has rendered little in return. Its stock is so valuable as an investment that it is not for sale on the exchanges. The more guilty of the other corporations are the wealthiest—those that enjoy the greatest privileges, and are the most persistent applicants for favors at the hands of state legislatures and municipal councils. Scarce a week passes in the course of which they do not petition the Common Council for the vacation of certain public streets or alleys for their benefit ; that they do not ask the condemnation of private property for depot, track, or yard uses ; that they do not claim exemption from some of the burdens of taxation imposed for the general good, and their own benefit particularly. When viaducts across their tracks are proposed they fight the plans inch by inch, refuse to bear their share of the expense when they are finally ordered, and pay their taxes—but a fraction of their equitable share—only after every means of delay known to shrewd lawyers has been exhausted. Their crossings and switches are guarded by decrepit old men who are hired for a song ; their gates are seldom in working order ; the gongs, which the law requires them to keep at crossings, are seldom sounded, and if struck are found to be cracked and practically useless ; their danger lights at night burn but fitfully if at all, and their engines and trains rush madly onward through the streets utterly regardless

of the law regulating railway speed within corporate limits.

But it is said that there is never a great loss without some small gain. This is true of the railway slaughter, as well as of other things. The grade crossings are a source of great profit to the coroner and his assistants. Without grade crossings the office of coroner would not be worth the seeking. Inquests upon the remains of victims of crossing accidents help the coroner to make both ends meet, and give a pittance for beer money to each of the six jurors he summons. To be sure, the people have to pay the bills, but the railroads care nothing for that. They save the cost of elevating or depressing their tracks, and that is an item worth their consideration. In perhaps one case in a hundred they may be compelled to pay damages to relatives of slaughtered men, but the amount will be insignificant compared with the cost of viaducts or subways or elevated terminals.

The people of Chicago are praying for relief from the grade-crossing menace to life and property. Will they ever receive it? They are asking public officials to enforce existing laws relative to guards at railway street crossings. Will the city authorities comply with the demands? They are asking if they have any right which railway corporations are bound to respect. Have they? They are asking the Legislature and the City Council for the passage of laws which will make life on the public thoroughfares reasonably safe. Will such laws ever be passed? They are demanding that the railroads render some equivalent for the privileges they are enjoying. Will their wishes be gratified?

SIX MONTHS' WORK OF THE JUGGERNAUT.

DATE.	NAME.	RAILROAD.	REMARKS.
January 2	FRANK LANG	Chicago, Burlington and Quincy	Track walking.
January 2	GEORGE H. WINNIE	Belt railway	Track walking.
January 2	J. J. WHISNER	Lake Shore	Track walking.
January 2	THOMAS GALLAGHER	Chicago and Northwestern	Railroad employe.
January 4	JOHN FISHER	Baltimore and Ohio	.....
January 5	JOHN McGUANE	Panhandle	Railroad crossing.
January 6	MATHIAS GLIENICKE	Chicago and Northwestern	Railroad employe.
January 6	JOSEPH NOWAK	Atchison, Topeka and Santa Fé	Track walking.
January 7	A. E. JEMENEZ	Illinois Central	Suicide.
January 7	STILLMAN SHEPHARD	Chicago and Northwestern	Track walking.
January 7	MICHAEL MURRAY	Chicago and Grand Trunk	Track walking.
January 8	DORA MURPHY	Chicago and Northwestern	Track walking.
January 8	E. J. GALLAGHER	Rock Island	Track walking,
January 9	JOHN KURPTENA	Chicago, Burlington and Quincy	Railroad crossing.
January 10	DONATO BAGANOLO	Fort Wayne	Railroad crossing.
January 11	R. C. EVANS	Illinois Central	Railroad crossing.
January 12	HERMAN CROSS	Fort Wayne	Railroad crossing.
*January 14	MARY GILMORE	Fort Wayne	Railroad crossing.
*January 14	MAGGIE GILMORE	Fort Wayne	Railroad crossing.
January 15	AN UNKNOWN MAN	Chicago and Northwestern	Railroad employe.
January 16	JOHN SHULER	Illinois Central	Track walking.
January 17	COOK N. HARTER	Illinois Central	Track walking.
January 19	LAWRENCE DOYLE	Fort Wayne	Railroad crossing.
January 19	ELLEN O'NEIL	Chicago and Alton	Track walking.
January 20	AGATHA LEBUWINKAS	Chicago and Northwestern	Track walking.
January 20	ADAM OCHS	Panhandle	Railroad crossing.
January 21	JOHN LANNEN	Chicago and Erie	Railroad crossing.
January 22	GEORGE PATTON	Rock Island	Railroad employe.
January 25	W. F. CHARLSON	Chicago, Burlington and Quincy	Track walking.
January 29	ROBERT KAMMERAT	Chicago and Northwestern	Track walking.

* These two girls were killed in that street-car horror which shocked the community last winter. There were a dozen others maimed for life at the same time.

SIX MONTHS' WORK OF THE JUGGERNAUT—*Continued.*

DATE.	NAME.	RAILROAD.	REMARKS.
January 29	BETTY OLSON	Lake Shore	Track walking.
January 31	CHRISTIAN SCHULTZ	Chicago, Milwaukee and St. Paul	Railroad crossing.
February 3	AN UNKNOWN MAN	Chicago and Western Indiana	Railroad crossing.
February 3	JOHN SWEENY	Panhandle	Track walking.
February 4	ALBERT RICHTER	Chicago and Northwestern	Track walking.
February 4	MALACHI MULLIN	Chicago and Eastern Illinois	Railroad employe.
February 5	CATHERINE LEWANDOWSKI.	Baltimore and Ohio	Track walking.
February 6	THOMAS GOODBODY	Chicago, Milwaukee and St. Paul	Track walking.
February 8	ALEX SEYMOUR	Illinois Central	Railroad employe.
February 8	ERIC PETERSON	Lake Shore	Track walking.
February 9	W. C. KELLER	Chicago and Grand Trunk	Railroad employe.
February 10	WILLIAM LIVENS	Fort Wayne	Track walking.
February 10	JULIUS SCHWARTZ	Pennsylvania Company	Railroad employe.
February 10	J. M. CLARKE	Chicago and Northern Pacific	Railroad employe.
February 11	SOREN NELSON	Chicago, Milwaukee and St. Paul	Track walking.
February 11	HENRY BERGMAN	Chicago and Northwestern	Track walking.
February 11	JAMES KALIWOODA	Chicago and Northern Pacific	Railroad crossing.
February 17	THOMAS E. TAYLOR	Chicago and Northwestern	Railroad employe.
February 22	THOMAS CHRISTOPHER	Belt railroad	Track walking.
February 24	CHARLES RUMPFF	Chicago and Northwestern	Railroad crossing.
February 27	E. H. DAVIS	Belt railroad	Railroad employe.
March 1	IGNATIUS MILLER	Illinois Central	Track walking.
March 2	DENNIS KERRIGAN	Lake Shore	Railroad crossing.
March 2	CATHARINE DALEY	Wabash	Track walking.
March 5	HENRY M'CANN	Illinois Central	Railroad crossing.
March 5	ELIZABETH EASTWOOD	Chicago and Northwestern	Railroad crossing.
March 7	JAMES M'MULLEN	Chicago and Eastern Illinois	Track walking.
March 7	VITA SERRITELLA	Chicago, Burlington and Quincy	Track walking.
March 9	F. MORRISSEY	Lake Shore	Track walking.
March 9	FRANCIS FREE	Wabash	Railroad crossing.
March 9	F. BROVAK	Belt Line	Track walking.
March 10	M. TOKARSKI	Chicago and Northwestern	Track walking.

SIX MONTHS' WORK OF THE JUGGERNAUT—*Continued.*

DATE.	NAME.	RAILROAD.	REMARKS.
March 12	W. SAUL	Chicago and Grand Trunk	Getting on.
March 12	JOHN CALLAHAN	Chicago and Northwestern	Track walking.
March 15	KLAUS MUNDT	Wabash	Track walking.
March 16	FRANK M. BROWN	Illinois Central	Getting off.
March 19	ADAM ELSEN	Chicago, Milwaukee and St. Paul	Track walking.
March 21	HILLET MAGILEAR	Chicago, Milwaukee and St. Paul	Track walking.
March 23	WALTER BROWN	Chicago, Burlington and Quincy	Track walking.
March 23	BARBARA BENEDICT	Chicago and Grand Trunk	Track walking.
March 25	JOHN G. McCOMB	Illinois Central	Track walking.
March 25	GEORGE SHERMAN	Baltimore and Ohio	Track walking.
March 30	MICHAEL O'CONNELL	Chicago and Northwestern	Railroad crossing.
April 2	MAGNUS CALLEN	Chicago and Western Indiana	Track walking.
April 3	B. JANITSKI	Chicago and Northwestern	Getting on.
April 4	MARY GEMBELL	Chicago and Grand Trunk	Railroad crossing.
April 5	J. J. P. THEOBALD	Chicago, Milwaukee and St. Paul	Railroad crossing.
April 6	FRANK KRAUSE	Lake Shore	Railroad crossing.
April 6	JOHN TWOHEY	Lake Shore	Railroad employe.
April 9	JAMES FRAWLEY	Baltimore and Ohio	Track walking.
April 10	JOHN O'NEILL	Fort Wayne	Railroad crossing.
April 15	JAMES REILLEY	Rock Island	Railroad crossing.
April 20	EDWARD BRADY, Jr.	Chicago and Northwestern	Track walking.
April 22	C. E. WILKINSON	Chicago, Burlington and Quincy	Track walking.
April 23	JOHN McQUARRIE	Lake Shore	Railroad crossing.
April 25	ROBERT A. SMITH	Chicago, Burlington and Quincy	Railroad crossing.
April 28	ROBERT BLACK	Chicago, Milwaukee and St. Paul	Railroad crossing.
April 28	T. T. HENRY	Chicago, Burlington and Quincy	Track walking.
April 28	JOHN PIORCK	Chicago, Burlington and Quincy	Railroad employe.
May 2	A. H. HOOVER	Michigan Central	Railroad crossing.
May 5	SUSIE DE MICHELE	Chicago, Milwaukee and St. Paul	Track walking.
May 7	C. J. KLOR	Chicago, Burlington and Quincy	Railroad crossing.
May 8	ELLEN DUNN	Chicago, Milwaukee and St. Paul	Track walking.
May 9	MICHAEL HECK	Chicago and Erie	Track walking.

SIX MONTHS' WORK OF THE JUGGERNAUT—*Continued.*

DATE.	NAME.	RAILROAD.	REMARKS.
May 10	W. J. FRANCISCO	Chicago and Grand Trunk	Railroad crossing.
May 11	J. B. DUNMORE	Wabash	Railroad crossing.
May 12	R. F. VALTZ	Rock Island	Track walking.
May 14	THOMAS LOFTUS	Chicago and Northwestern	Railroad crossing.
May 15	LEON M. KOWSKI	Atchison, Topeka and Santa Fé	Track walking.
May 15	J. R. KOUNTZ	"Monon"	Track walking.
May 15	E. BENEDICT	Chicago and Grand Trunk	Railroad crossing.
May 17	SYDNEY FULLER	Panhandle	Railroad crossing.
May 18	WILLIAM HARLEY	Chicago and Northwestern	Track walking,
May 20	W. K. PECK	Chicago and Grand Trunk	Railroad crossing.
May 20	MATILDA COOPER	Chicago and Northwestern	Railroad crossing.
May 23	JOHN CUNNINGHAM	Chicago and Northwestern	Track walking.
May 23	JOHN JARZAKOWSKI	Chicago and Northwestern	Getting off.
May 24	EDWARD SHAY	Fort Wayne	Railroad crossing.
May 26	ALBERT MAY	Chicago, Minneapolis and St. Paul	Track walking.
May 26	CHARLES FRANCE	Lake Shore	Track walking.
May 28	GEORGE GEARS	Illinois Central	Railroad crossing.
May 28	UNKNOWN MAN	Chicago and Eastern Illinois	Railroad crossing.
May 30	MYERS MOODY	Illinois Central	Jumping off.
May 30	E. H. HANSEN	Chicago and Northwestern	Railroad crossing.
May 31	GEORGE F. STERKEL	Rock Island	Track walking.
June 2	UNKNOWN MAN	Illinois Central	Track walking.
June 8	CHARLES SELL	Illinois Central	Track walking.
June 11	DANIEL BOHL	Chicago, Minneapolis and St. Paul	Track walking.
June 11	AUGUST NETH	Lake Shore	Getting on.
June 11	P. H. GAVIN	Illinois Central	Railroad crossing.
June 14	JOSEPHINE H. JOHNSON	Chicago and Eastern Illinois	Track walking.
June 15	P. F. KOSOWSKY	Chicago and Northwestern	Track walking.
June 16	JAMES FLEMING	Illinois Central	Getting on.
June 17	WILLIAM HARDER	Chicago and Northwestern	Track walking.
June 18	JOSEPH BROWN	Chicago and Northwestern	Railroad crossing.
June 19	GEORGE PALMER	Lake Shore	Railroad crossing.

SIX MONTHS' WORK OF THE JUGGERNAUT—*Continued.*

DATE.	NAME.	RAILROAD.	REMARKS.
June 21	LORENZ WORSCHEK	Belt Line	Track walking.
June 21	AN UNKNOWN MAN	Chicago and Northwestern	Railroad crossing.
June 22	JOHN E. LESSEY	Wabash	Getting on.
*June 22	AN UNKNOWN MAN	Lake Shore	Track walking.
*June 22	AN UNKNOWN MAN	Lake Shore	Track walking.
June 22	WILLIAM PHILAN	Chicago, Milwaukee and St. Paul	Railroad crossing.
June 24	JOHN W. PEARSON	Chicago and Eastern Illinois	Track walking.
June 24	PETER DOOLEY	Illinois Central	Getting on.
June 24	NATHAN COBB	Chicago and Northwestern	Track walking.
June 25	NICHOLAS REGETH	Chicago and Northwestern	Track walking.
June 28	JOSEPHINE LASEK	Chicago and Northern Pacific	Track walking.
June 28	DAVID DUNN	Chicago and Grand Trunk	Railroad crossing.
July 1	HENRY SPARKLIN	Rock Island	Track walking.
July 2	THOMAS WEISZ	Chicago, Burlington and Quincy	Railroad crossing.
July 4	HENRY MILLER	Chicago and Northern Pacific	Railroad crossing.
July 6	JOSEPH MILANO	Chicago, Burlington and Quincy	Railroad crossing.
July 8	CHARLES LINO	Chicago, Milwaukee and St. Paul	Railroad crossing.
July 15	JOHN KAGEIBIEN	Chicago and Northwestern	Railroad crossing.
July 16	WILLIAM BOCH	Atchison, Topeka and Santa Fé	Railroad crossing.
July 16	JOHN A. FEENEY	Chicago and Northern Pacific	Railroad crossing.
July 16	FRED JOHNSON	Rock Island	Railroad crossing.
July 16	ANDREW SWEENEY	Northern Pacific	Railroad crossing.
July 16	WILLIAM BACH	Atchison, Topeka and Santa Fé	Boarding train.
July 17	ROBERT JACKSON	Illinois Central	Track walking.
July 17	JOHN M'HALE	Chicago and Northwestern	Fell from engine.
July 22	FRANK FISCHER	Illinois Central	Working between cars.
July 22	MICHAEL DAVIS	Calumet and Blue Island	Climbing on car.
July 22	JOHN FRAZIER	Illinois Central	Railroad crossing.
July 23	JOSEPH NEWMAN	Illinois Central	Railroad crossing.
July 24	SAMUEL BERTMAN	Wabash	Fell from train.
July 25	JOHN CARROLL	Chicago and Northwestern	Alighting from train.

* These two men were killed together. They were never identified.

SIX MONTHS' WORK OF THE JUGGERNAUT—*Continued.*

DATE.	NAME.	RAILROAD.	REMARKS.
July 25	JOHN GIBBENS	Illinois Central	Track walking.
July 25	JOHN FAY	Illinois Central	Track walking.
July 25	JOHN SHOBER	Illinois Central	Railroad crossing.
July 25	PATRICK HURLEY	Illinois Central	Railroad crossing.
July 25	HENRY YOUNG	Northern Pacific	Depot accident.
July 25	DINAH CARR	Northern Pacific	Depot accident.
July 26	JAMES KELLEY	Chicago and Eastern Illinois	Railroad crossing.
July 27	H. GILMORE	Chicago and Eastern Illinois	Railroad crossing.
July 28	UNKNOWN MAN	Chicago and Northwestern	Railroad crossing.

[*From the Chicago Herald, Aug. 2, 1892.*]

THE SURFACE GRADE HALF-YEAR.

The *Herald* printed Sunday the names of the victims of surface-grade railroads for the half-year ending July 28th. In each the date of the death was given, the address of the victim, if known, and the name of the railroad doing the deed. In every instance the death was not due to the crossings. In a few cases the victims were themselves largely to blame. But in all cases had the road been elevated the casualty could not have occurred. Deaths on elevated tracks from the causes that heap up their numbers on surface tracks are practically unknown. Accidents occur wherever machinery and power are employed. Elevated roads are not assured of absolute immunity from deaths and maimings. But the proportion is less by far; and the causes that make surface railroads daily slaughterers of human beings are unknown on elevated roads properly built and equipped.

The number of persons killed by surface-grade railroads in Chicago since January 1st is 166. Of these seven were never identified. When the stale joker of the stage tells a rural audience that it is easy to go to a big city, be killed and never heard of afterward, the seeming jest calls forth roars of laughter. In six months, as facts show, seven men have been killed in Chicago whose identity remains unestablished.

For these seven no claim has ever been made to the corporations that took them out of the world, leaving unprovided for, in all probability, a number

of human beings for whom their lives were useful and necessary. Four of the seven were killed on grade crossings, probably strangers who did not expect to find steam locomotives flying at grade through a great city. Two were killed, as alleged, while walking on the tracks. But the tracks were within the city limits, and the ignorant men did not know any other way of getting to the place they wished to reach. Had the tracks been elevated these six lives need not have been lost. The seventh, entered at the coroner's office as "an unknown man," is described as "railroad employé." He was employed, it appears, on the road that killed him. Did not the head of the gang or the crew, on the section in which he was employed, know his name? Was he employed without a name? Scarcely.

Of the remainder, less than twenty were women; The great majority were able-bodied and industrious men, engaged, as a rule, in occupations affording support to families. In every case, so far as known, a family was left without its sole breadwinner. No matter how many children; no matter how deep the poverty or how ill the health of the widowed mother, in none of these cases was the slaughtering corporation, no matter how clear its exclusive guilt, liable for more than $5,000. How far would that sum go in taking the place of a father able and eager to provide for the education of his family and their maintenance in decency and comfort? But when was there a case in which the guilty corporation voluntarily paid the limit allowed by law to the victims of its slaughtering wheels?

Every claim is rigidly fought. The miserable or-

phans in many instances never even attempt to compel the corporation to pay a cent. Process lies through the courts. Lawing costs money. Hapless little children are often so desperately situated with poor relatives that they cannot get one of them to begin action. Costs must be paid to clerks and retainers to lawyers before claims can be filed. Thus, the authors of life-taking at a ratio of a human being a day every day in the year, often escape even the annoyance of being requested to fight over the payment of damages.

The people of Chicago have no reason to complain of this. They are responsible for it. They license slaughtering by surface-grade corporations. It lies with them to end it. It is they who make every orphan, every widow. The surface grades must disappear whenever they speak the word of authority and elect a council to carry it out.

[*From the Chicago Herald, Aug.* 5, 1892.]

GIVEN TO A MOLOCH.

HUMAN SACRIFICES TO RAILROADS—SLAUGHTER ON THE ILLINOIS CENTRAL LINE DURING THE RECENT HOT SPELL—WHY THE CLAIM AGENTS OF THE CORPORATIONS MAINTAIN SECRECY.

While the red-hot sun was striking people dead by the score last week, attention was diverted from the Juggernaut of the railroad crossings, but it seems that the dreadful slaughterer was not idle during those trying times, and the allegation was made yesterday

that six persons had been killed in a single day within the city limits by one road, the Illinois Central.

This seems to have been a mistake. Investigation of the records of the coroner's office shows that the mortality on the Illinois Central tracks within the bounds named did not on any one day exceed four, although an inquest on a fifth victim was held on the same day, which was misleading in a sense. The bald truth is horrible; no embellishments are necessary.

The bloody story of July 25th includes mention of the death under the wheels of the Illinois Central Juggernaut of—

Gibbons, John, 8 One Hundred and Fourth street.
Schrober, Sr., John, 2502 South Park avenue.
Hurley, Patrick, 3436 Emerald avenue.
Fay, John, Chicago.

On the same date the coroner "sat on" the remains of Joseph Neumann, 3311 State street, and on the 27th Henry Gilmore, 5437 Lake avenue, was run over. The record as tersely stated by the coroner's historian is as follows:

July 25—Joseph Neumann was accidentally killed by engine 221, drawing the Illinois Central train 154, between Thirty-second and Thirty-third streets. Died July 23d.

July 25—John Gibbons lies dead at Pullman. Was run over by Illinois Central train No. 5, drawn by engine 331, near the One Hundred and Thirteenth street crossing. Could not determine whether accidental or not.

July 26—John Schrober, Sr., 62 years old, was struck and run over by Illinois Central switch engine

No. 3, July 25th, near Twenty-sixth street. The jury believes the accident to be due to gross carelessness on the part of the engineer and fireman in not giving warning by whistle or bell.

July 26—Patrick Hurley was struck by Illinois Central engine No. 303 near Thirtieth street, July 25th, and killed.

July 26—John Fay was struck July 25th, between Sixty-third and Sixty-fourth streets by an Illinois Central engine and train and died from the shock and injuries received in being run over.

July 28—Henry Gilmore was killed at Sixty-second street crossing by an Illinois Central train July 27th.

OTHER GRADE SLAUGHTERS.

In addition to the last week's fatalities above enumerated, the Baltimore and Ohio killed Henry Young at the Grand Central depot, the St. Paul crushed the life out of Dora Pickette, the Burlington furnished a case for the coroner in the person of Basseleo Palumbo and a Northwestern express train ran down a girl at Glencoe.

How many persons were maimed by the Juggernaut but escaped with their lives is not known.

A corporation has a horror of newspaper publication of accidents, for the reason that such publicity inspires general criticism, and also because the law firms that are engaged in the encouragement of accident damage litigation get their runners out after the injured persons or the heirs of those who are killed. In this way settlements on the company's terms are made difficult, and victims are sometimes enabled to force fair payment to compensate for injuries.

This will explain the real secret of the clam-like reticence of the claims departments when approached for information in regard to accidents. If they can settle a death for $2,500, get off with $3,000 or $4,000 for the amputation of a leg or an arm, or escape by the payment of anywhere from $500 to $6,000 from further liability for an accident that results in the paralysis or other permanent injury of a person, the claim agent of a corporation feels that he has scored a great triumph. These victories are only possible where the accidents are kept dark. Hence the policy of silence that envelops the mutilation department of a railroad corporation.

Elevate the tracks and stop the grade-crossing slaughter.

MAIMED BY THE RAILROAD CARS.

VICTIMS OF THE GRADE TRACKS TAKEN TO THE COUNTY HOSPITAL.

James Rogers was admitted to the county hospital last night with his left arm so badly crushed that it will have to be amputated at the shoulder. Rogers is a laborer, who came to the city yesterday from Gorum, N. H., to seek employment. He said that a brakeman on a Northwestern freight train pushed him off the car at Clinton and Kinzie streets and that a wheel passed over his arm.

Elevate the tracks and stop the grade-crossing slaughter.

William L. Hall, living at 621 West Thirteenth

street, and employed by the Northern Pacific Railroad company, was struck by a Chicago, St. Paul and Kansas City train at Twelfth street last night. He received a deep cut over the right eye and his left arm was broken. He was taken to the county hospital.

Elevate the tracks and stop the grade-crossing slaughter.

[*From Chicago City Hall Record* (*Official Paper*), *Saturday, Aug.* 20, 1892.]

Last Sunday's *Herald* contained a list of the railroad casualties that have taken place in this city during the past six months, which was the most effective sermon for the elevation of railway tracks that has been given our citizens for many a day. The list included about two hundred victims for the period mentioned, which is certainly something terrible to contemplate. Two hundred deaths from railroad "accidents" in six months! Considerably over an average of one victim a day, the aggregate being as large a number as the death-rate from all causes for a good-sized city of 30,000 or 40,000 inhabitants. Many of the victims in the list have never been identified, giving room for the presumption that in many cases family or friends are still looking for the absent ones that have been sent so hurriedly to the presence of their Maker. If there is one lesson in that sermon that calls for special remark more than another, it is that the duty of all public officials lies plainly in the direction of redoubling their efforts to compel the

railway corporations to come to some agreement that will relieve the city of this shocking brutality. Heretofore the corporations have adopted a procrastinating policy in reference to this matter that can no longer be tolerated. The responsibility lies entirely with the railway companies. It cannot be evaded or successfully shifted to the shoulders of others, and the first duty of the Common Council when it reassembles, and of the State Legislature when it convenes, should be to put an effectual stop to this disgraceful loss of life, no matter what the cost. We have arrived at that stage in our civic development where our lawmakers must make provision for greater safety and protection of human life. Evasions and delay on the plea of extraordinary expenses should no longer be accepted in lieu of action. No other city in the world would permit such a wilful sacrifice of life, and the people of Chicago will not put up with it much longer.

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